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CHILDREN'S AND NURSES' PERCEPTIONS OF STRESSFUL AND SATISFYING SITUATIONS RELATED TO HOSPITALIZATION

BY

© JANNICE E. MOORE

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH

IN PARTIAL FULFULLMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF HEALTH SERVICES ADMINISTRATION

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DEPARTMENT OF COMMUNITY MEDICINE

EDMONTON, ALBERTA

SPRING, 1977

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "Children's and Nurses' Perceptions of Stressful and Satisfying Situations Related to Hospitalization" submitted by Jannice E. Moore in partial fulfillment of the requirements for the degree of Master of Health Services Administration.

Supervisor

Date . April 19th, 1977. .

DEDICATION

To my mother, and in memory of my father, whose love and encouragement have inspired me.

ABSTRACT

This exploratory study was conducted to determine whether nurses could correctly identify hospitalized children's reported perceptions of stress and satisfaction, and to examine demographic, organizational, and illness-related variables which might be related to children's perceptions and nurses' identification of those perceptions. The study was based on the premise that the nurse's ability to correctly identify children's perceptions is not a sufficient, but a necessary condition to ensure the delivery of individualized patient care.

A sample of seventy children aged six to twelve was randomly selected from eligible patients in five general acute-care hospitals and two pediatric hospitals. Two equal strata were chosen, long and short-term length-of-stay.

Tape-recorded interviews with children were based on a semi-structured open-ended interview schedule. Each child was asked to report situations occurring on the day of and the day preceding the interview, in which he felt stressed or satisfied. The nurse caring for each child was asked to identify on an open-ended questionnaire situations in the same time period in which she felt the child had felt stressed or satisfied. Responses were categorized by two independent judges using the technique of content analysis.

Analysis indicated that children reported both stress and satisfaction related to people more frequently than stress and

satisfaction related to any other factor; certain demographic and illness-related variables were related to the types of stress and satisfaction reported by the children studied.

Nurses reported body-related situations as most frequently stressful to the children, and people-related situations as most frequently satisfying. The relationship of demographic and organizational variables to nurses' reports was not conclusively identified.

Nurses agreed with children's perceptions in less than one-quarter of situations reported by children. Several demographic and organizational factors were related to agreement with stressful and satisfying situations in the population studied.

This study was exploratory in nature, and because of the small sample size and lack of rigour in establishing reliability and validity, findings must be considered tenuous. Conclusions were based on the sample studied, which was regarded as a population. Similar conclusions based on other studies would be required before any generalizations could be made to other populations. However, the study raises a serious question regarding the ability of nurses to identify perceptions of individual children, and thus raises a serious question regarding one of the important bases for the provision of personalized patient care.

ACKNOWLEDGEMENTS

Many people deserve mention and thanks for enabling me to complete this study. Special thanks go to Dr. Shirley Stinson, who supervised my thesis, and whose selfless giving of herself and her insights has constantly encouraged me and broadened my horizons. I would also like to thank Dr. Clarke Hazlett for his encouragement and assistance on methodological aspects of the study, and Dr. Madanjit K. Paul for serving on my Committee.

Dr. Helen Simmons deserves special thanks for taking time from her busy schedule to discuss with me with the initial stages of this study, and to painstakingly critique my interviewing skills. Thanks also go to Mrs. Peggy Overton, whose ready ear was very helpful in my attempts to define the problem under study.

Thanks go to the Directors of Nursing of the hospitals in which the study was conducted, and especially to the Head Nurses and Nursing Staff of the units involved in the study. I would also like to thank the children who participated in the interviews, and whose delightful candor made the data collection an enjoyable experience.

Acknowledgement is made to Health and Welfare Canada, whose financial assistance through National Health Student Fellowship No. 609-1053-47 made it possible for me to pursue my studies.

I am grateful to Mrs. Dawn Smith, who spent many hours categorizing the content of interviews, and to Mrs. Rosalie Hodges,

who unfailingly met all of my typing deadlines.

Credit goes as well to my classmates, whose friendship and support through two busy years will always be remembered.

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J. E. M.

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1. The Research Design 44

In the hospital you get used to lots of things.

You get used to staying in bed when you don't want to.

And feeling your back itch when you can't scratch it.

You get used to having your bath in bed and even going to the toilet in a bed pan.

You get used to missing your dog and missing your friends.

You get used to listening to babies cry, and seeing your mommy and daddy just when they want to come to visit you.

That's quite a lot of getting used to.

- James Robertson

CHAPTER I

INTRODUCTION

Problem, Objectives, and Purpose

The undesirable effects of hospitalization on the child have been attested to in a large volume of literature.[1] In contrast, very little has been written regarding any positive aspects of hospitalization. The general problem explored in this study was that of determining the nurse's ability to identify situations related to hospitalization which the child reported were perceived as stressful or satisfying.

The nurse's accurate identification of the child's reported perceptions of situations encountered in the hospital does not ensure that individualized patient care will be given, but from a rational, logical viewpoint, such identification is a necessary basic step in the provision of individualized patient care. The overall objective in this study was to explore to what extent this condition for individualized patient care was met, and what, if any,

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[1]David T. A. Vernon et al., The Psychological Responses of Children to Hospitalization and Illness: A Review of the Literature (Springfield: Charles C. Thomas, 1968); and Edward A. Mason, "The Hospitalized Child--His Emotional Needs," The New England Journal of Medicine 272 (25 February 1965): 406-14, are examples of literature reviews on the subject. Vernon reviews the literature from 1947 to 1962, while Mason, in less detail, summarizes the literature up to 1965.

variables were systematically related to the nurse's ability to identify the child's reported perceptions.

The specific research objectives centered upon (1) the description and comparison of the nurse's and the child's reports of situations which were perceived as stressful or satisfying to the hospitalized child, and (2) the identification of systematic influence of selected demographic, illness-related, or organizational variables on the child's reported percpetions of stressful and satisfying situations, and on the nurse's ability to identify those perceptions.

The purpose of this study was to assist in improving the quality of nursing care by providing a more rational basis for individualized care. Identification by the nurse of situations perceived by the child as stressful necessarily precedes the planning, delivery, and evaluation of care designed to remove or alleviate those situations; similarly, identification of satisfying situations is logically relevant to creating circumstances which facilitate satisfying experiences, whether the reason for so doing is simply the intrinsic worth of the satisfaction or the desire to offset stressful events and/or reward "good" behavior. A more detailed explication of the purpose of the study is presented in the last section of chapter II.

Need for the Study

Much of the literature related to the effects of hospitalization on the child focuses on the harmful effects of

separation of the young child from his mother.[1] Less has been said about the effects of hospitalization on the school-aged child. Several authors have made general statements about the emotional needs of children in hospital, relating these needs to the child's developmental stage.[2]

A number of investigators have studied relationships of such variables as age of the child and previous hospitalization, with his reaction to hospitalization.[3] Menke's study is one such example.[4] However, in the Menke study, as with the majority of

---

[1]A few examples of this body of literature are James Robertson, Young Children in Hospital (London: Tavistock Publications, Ltd., 1958); James Robertson, ed., Hospitals and Children: A Parent's Eye View (New York: International Universities Press, 1963); Harold Geist, A Child Goes to the Hospital: The Psychological Aspects of a Child Going to the Hospital (Springfield: Charles C. Thomas, 1965); Dane G. Prugh, "Emotional Aspects of the Hospitalization of children," in Red is the Color of Hurting: Planning for Children in the Hospital, ed. Milton F. Shore (Washington: U.S. Department of Health, Education and Welfare, 1965); and Ellamae Branstetter, "The Young Child's Response to Hospitalization: Separation or Lack of Mothering Care," American Journal of Public Health 59 (January 1969): 92-7.

[2]Hedley G. Dimock, The Child in Hospital: A Study of His Emotional and Social Well-Being (Toronto: The Macmillan Company of Canada, Ltd., 1959); Care of Children in Hospitals (Evanston, Illinois: American Academy of Pediatrics, 1960); and Elizabeth Gellert, "Reducing the Emotional Stresses of Hospitalization for Children," American Journal of Occupational Therapy 12 (May-June 1958): 125-9, 155.

[3]Two examples are: William S. Langford, "The Child in the Pediatric Hospital: Adaptation to Illness and Hospitalization," American Journal of Orthopsychiatry 31 (October 1961): 667-84; and Lucy Kunzman, "Some Factors Influencing a Young Child's Mastery of Hospitalization," Nursing Clinics of North America 7 (March 1972): 13-26.

[4]Edna Mae Menke, "Factors Related to Children's Perception of Stress in the Hospital" (Ph.D. dissertation, Ohio State University, 1972).

others, the methodologies are such that the findings must be regarded as highly tentative.[1]

Several studies have been conducted to determine patient satisfaction with care, the most notable of which is Abdellah's and Levine's major study to measure patient and personnel satisfaction with nursing care. In this study, adult patients were asked to indicate whether or not certain events had occurred during their hospitalization. A weighting system for responses was developed by having a sample of patients and personnel rank events which were most important to the quality of care, using a Q-sort technique.[2] In a more recent study by Anderson, patients were asked to rank the importance of ten nursing activities, in an attempt to measure satisfaction with care.[3] Only one study was located in which the investigators dealt with the congruence of client and personnel perceptions. Freeborn and Pope, in a recent project, examined the degree of congruence between clients' reports of their perceptions, reactions, and experiences in a large medical care system, and reports by system personnel of the clients' perceptions. The system studied included several hospitals, outpatient clinics, and a large group medical practice. The investigators found that

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[1]Menke's study will be discussed chapter II.

[2]Faye G. Abdellah and Eugene Levine, "Developing a Measure of Patient and Personnel Satisfaction with Nursing Care," Nursing Research 5 (February 1957): 100-108.

[3]Evelyn R. Anderson, The Role of the Nurse, The Study of Nursing Care Project Reports, Series 2, Number 1 (London: Royal College of Nursing, 1973).

system personnel underestimated the level of satisfaction reported by the clientele.[1]

In all but one of the studies reviewed, the focus was on satisfaction with the care given, as opposed to satisfaction related to factors other than care. This investigator did not find any studies which dealt with children's satisfaction; the respondents in all satisfaction studies were adults. No studies were located which dealt with the child's perceptions of stressful or satisfying factors as they relate to hospitalization and the nurse's identification of those perceptions. Seidl compared the perceptions of parents and nurses regarding parent participation in care.[2] Similarly, Merrow and Johnson compared nurses' and mothers' perceptions of the mother's role with her hospitalized child.[3] In a recent exploratory study, Goshman compared attitudes toward hospitalization of pediatric staff and parents of hospitalized

---

[1]Donald K. Freeborn and Clyde R. Pope, "Consumer Satisfaction in an HMO: Clients Versus System Personnel" (paper presented at the American Public Health Association 104th Annual Meeting, Miami Beach, Florida, October 17-21, 1976).

[2]F. W. Seidl, "Pediatric Nursing Personnel and Parent Participation: A Study in Attitudes," Nursing Research 18 (January-February 1969): 40-44.

[3]Dorothy Merrow and Betty Sue Johnson, "Perceptions of the Mother's Role with Her Hospitalized Child," Nursing Research 17 (March-April 1968): 155-6.

children.[1] However, the children's attitudes were not investigated. Hawthorn evaluated nurses' "understanding" of children's emotional needs by comparing nurses' replies to a questionnaire with a "standard" based on child care theories and selected empirical measures thought by Hawthorn to indicate the emotional needs of children.[2]

The importance of perceptions in determining behavior is emphasized by Combs and Snygg:

> People do not behave according to the facts as <u>others</u> see them. They behave according to the facts as <u>they</u> see them. What governs behavior from the point of view of the individual himself are his unique perceptions of himself and the world in which he lives, the meaning things have for him.[3]

It follows that if the nurse is able to identify the patient's perceptions, she should be in a better position to understand his behavior, and thus to assess and meet his needs. One need not be a confirmed Skinnerian to assume that it is not enough for the nurse to be able to identify only stressful situations; she must also be able to identify what the child perceives as satisfying situations. The nurse's ability to identify the patient's perceptions is not a

---

[1]Barbara Goshman, "Difference in Attitude Toward Hospitalization Between Pediatric Staff and Parents of Hospitalized Children," in "Precis Packet", Conference of the Western Society for Research in Nursing (Seattle: May 5, 1976). (Mimeographed).

[2]Pamela J. Hawthorn, <u>Nurse--I Want My Mummy</u> (London: Royal College of Nursing, 1974).

[3]Arthur W. Combs and Donald Snygg, <u>Individual Behavior: A Perceptual Approach to Behavior</u> (New York: Harper and Brothers, 1959), p. 17.

sufficient condition to ensure the delivery of individualized patient care; however, it is a basic premise of this study that it is a necessary condition. Put another way, in the absence of correct identification of the patient's perceptions, the nurse's subsequent actions are unlikely to meet the patient's needs. In this study the investigator attempted to evaluate the nurse's ability to identify patient perceptions, using the hospitalized school-aged child's reported perceptions as the focus of comparative measurement.

Research Approach

> For it is not to be denied that the carrying over of the methods of natural science to the social sciences gradually leads to a situation where one no longer asks what one would like to know and what will be of decisive significance for the next step in social development, but attempts only to deal with those complexes of facts which are measurable according to a certain already existent method. Instead of attempting to discover what is most significant with the highest degree of precision possible under the existing circumstances, one tends to be content to attribute importance to what is measurable merely because it happens to be measurable.[1]

Applying the above theme to nursing research, Stinson underlines the need for development of methodologies peculiarly suited to nursing phenomena, as opposed to blind adherence to "traditional scientific" approaches.[2]

---

[1]Karl Mannheim, Ideology and Utopia, trans. Louis Wirth and Edward Shils, [originally published in German in 1929], (New York: Atarcourt, Brace and World, Inc., n.d.), pp. 51-2.

[2]Shirley M. Stinson, "Central Issues in Canadian Nursing Research 1975," in Issues in Canadian Nursing [approximate title], publication in process, eds. R. Elliott and B. LaSor (Englewood Cliffs, N.J.: Prentice-Hall).

Two major investigative constraints largely determined the research approach utilized in the study reported here: (1) the general underdevelopment of the "state of the art" of identification and measurement of children's perceptions of stressful and satisfying situations; and (2) the lack of specific understanding of such perceptions as they pertain to the children's hospitalization experiences and nurses' abilities to identify such perceptions. It was primarily in light of these factors that an exploratory approach was deemed to be the most appropriate first step in the examination of the research problem (and thus the guiding questions) underlying this study. Content analysis was selected as the most appropriate major technique for analyzing the data.

Exploratory research does not permit the investigator to draw definitive conclusions; by its very nature it compels him to remain tentative in his findings. At the same time, it permits the investigator to examine vital problems, identify further problems, and make recommendations for future studies based on the exploratory work.

The investigator's decision to examine perceptions of both stressful and satisfying situations related to hospitalization, and the nature of the research design itself, were influenced by the Fox and Diamond study, in which student nurses were asked to describe their perceptions of stressful and satisfying experiences encountered in their educational programs.[1] While the "state of the

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[1]David J. Fox, Lorraine K. Diamond and associates, Satisfying and Stressful Situations in Basic Programs in Nursing Education (New York: Teachers College, Columbia University, 1965).

the art", the sample size, and the rigor of content analysis utilized by Fox and Diamond permitted definitive conclusions, whereas the present study does not, the two studies are similar in that data content consisted of subjects' perceptions (not behaviors), and the content pertained to perceptions of both stressful and satisfying experiences.

Definitions

For the purpose of this study, the following definitions apply:

Child: Any in-patient, between the ages of six and twelve inclusive, in a general acute-care pediatric unit in Edmonton, or a pediatric hospital in Alberta.

Nurse: The registered nurse, student nurse, certified nursing aide, certified nursing orderly, or child care worker assigned the major responsibility for direct care of the child on the day of the interview.

Perceptions: "Personal meanings which govern behavior."[1]

Stress: A pressure which "greatly tax[es] the adaptive resources of the biological or psychological system."[2] Stress may be of a positive or negative nature. In this study, unless otherwise defined, "stress" will refer to the negative concept of stress, i.e. "distress."

Satisfaction: "Anything that brings gratification, pleasure, or contentment."[3]

General acute-care pediatric unit: A pediatric unit located in a general acute-care hospital.

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[1] Combs and Snygg, Individual Behavior, p. 18.

[2] Richard S. Lazarus, Psychological Stress and the Coping Process (New York: McGraw Hill, Inc., 1966), p. 10.

[3] Webster's New World Dictionary, College Edition, 1960.

Pediatric hospital: A specialized hospital which admits children only.

Interview noise: Environmental factors which distract the interviewer's and/or interviewee's attention from the subject being discussed. "Low" noise is defined as background activity or sounds which do not appreciably distract from the interview. "Medium" noise is activity or sounds which are near or loud enough to cause some distraction. "High" noise is activity or sounds which are so near or intense as to disrupt the flow of conversation.

Short-term patient: A patient who was hospitalized for eight days or less at the time of the interview.

Long-term patient: A patient who was hospitalized for nine days or more at the time of the interview.

Nurse's ability to correctly identify the child's perceptions (agreement): The nurse's ability to report the occurrence of the same situation as the child reported, and to indicate that the situation was stressful or satisfying to the child, in accordance with the child's report.

Limitations

In this study reported perceptions of stressful and satisfying situations were not necessarily representative of all types of situations a child encounters while hospitalized. The reported situations were primarily utilized as a vehicle or medium by which to measure the nurse's ability to identify a child's perceptions.

The study was limited to children between the ages of six and twelve. Those children with critical illness, mental retardation, deafness, severe communication problems, or primary psychiatric diagnoses were omitted from the study. While identification of stressful and satisfying situations is logically crucial to the care of such children, additional and more complex methods would have had to be developed to interview them. Development of such methods was beyond the scope of this study.

The interviews were all conducted during the afternoon. Although children were asked to report situations occurring "yesterday and today", the time of day may have influenced their recall and/or perceptions of stressful and satisfying situations.

As Fox and Diamond underlined in their study which dealt with reported perceptions, respondents may have reacted to stressful or satisfying situations without being aware that they were doing so, may have been unwilling to report some situations, or may have deliberately responded falsely.[1] The very process of being interviewed may have been stressful to the child, and may thus have influenced his responses. Therefore, the situations reported cannot be assumed to be necessarily valid and/or an exhaustive list of all situations that actually occurred.

Older children required assurances that the taped interview was confidential, and they were more often self-conscious about speaking into the microphone than younger children, who were generally eager to hear what they sounded like on tape. The taping of interviews and this self-consciousness may have inhibited the responses of the eleven and twelve-year-olds.

Ideally, reliability of the replies of both children and staff should have been determined by re-interviewing after a lapse of time. However, because the time frame of the questions was limited to the preceding forty-eight hours, it was deemed impractical to attempt to re-interview within such a limited time frame. It was

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[1]Similar limitations were cited by Fox and Diamond, Satisfying and Stressful Situations, p. 12.

often difficult for the nurses to take enough time from their busy schedules to complete one questionnaire; to expect them to complete a second the same day was considered an unreasonable demand on their time. In an exploratory study of this nature, it was felt that trying to establish reliability in the rigorous sense of the word was impractical. However, measures were taken to ensure at least a level of quasi-reliability. These measures are discussed in the section on methodology.

The nature of the data was primarily nominal. According to Selltiz et al., "the use of nominal scales is characteristic of exploratory research, where the emphasis is on uncovering a relationship between two characteristics rather than on specifying, with some degree of precision, the mathematical form of the relationship. . . ."[1]

Two final limitations are that the raw data were categorized by only two people, and that the technique of content analysis used in this categorization has only face validity. Steps taken to deal with validity problems are discussed in chapter III.

Assumptions

It was assumed that stress and satisfaction constitute two separate but not necessarily independent variables. As emphasized above, it was also assumed that while the nurse's ability to identify the patient's perceptions is not a sufficient condition to ensure the delivery of individualized patient care, that it is a necessary condition.

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[1]Claire Selltiz et al., Research Methods in Social Relations (New York: Holt, Rinehart and Winston, 1966), p. 190.

Underlying Research Questions

Previous work in the area is too inconclusive to permit the formulation of formal research hypotheses. Consequently, the investigator formulated the following "guiding questions": (1) Will the child and the nurse report the same situations as stressful and satisfying to the child? (2) Will demographic, illness-related, or organizational variables[1] be predictive of the nurse's or the child's perceptions of situations which are stressful or satisfying to the child?

Sequence of Analysis

The report of this study is organized under five main sections. In chapter II a review of the literature related to the problem under investigation is presented. In chapter III the research design and methodology are detailed. The data are analyzed and discussed in chapters IV and V, and conclusions are drawn. Chapter VI contains a summary of the study, and recommendations based on the findings. Copies of the research instruments and selected tables are included in the appendices.

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[1] These variables are discussed in chapter III in the section on Research Instruments.

CHAPTER II

REVIEW OF SELECTED LITERATURE

This literature review is not intended to be exhaustive, but rather to bring into focus pertinent features of selected literature related to the variables under study. The following areas are considered: (1) stress and the hospitalization experience; (2) satisfaction and the hospitalization experience; (3) the relationship of stress and satisfaction; (4) stress and satisfaction as related to the child's hospitalization experience; (5) patient perceptions; and (6) implications of the study for nursing care. In the final section of this chapter, brief reference is made to selected literature relevant to the inductive approach utilized in this study.

Stress and the Hospitalization Experience

The phenomenon of stress has been widely studied. One of the foremost authorities on the subject is Selye, whose work has centered on the physiological adaptation of the body to stress. Selye defines stress as "the nonspecific response of the body to any demand made upon it." He outlines three stages in the body's reaction to continued stress, characterized as the "General Adaptation Syndrome." The first stage is an alarm reaction, followed by

resistance, and finally, exhaustion.[1]

According to Schaffer, a stressful situation is "one in which a major disruption of the relationship between an organism and its environment has taken place."[2] Three types of stressful situations are suggested: (1) "traumatic" situations, in which inescapable external stimuli or stimuli for which there is no "adequate adjustive response" overwhelm the organism, (2) "frustration" situations, in which "the adequate object for an aroused drive or expectation essential to the motivational structure of the organism is not forthcoming from the environment", and (3) "conflict" situations, in which the organism is torn between two simultaneous strong drives.[3] The experience of hospitalization is potentially a stressful situation of any or all of these three types.

Other investigators have focused on the psychological components of stress. Lazarus states that responses to stress may be grouped into four categories: physiological change, disturbed affects, motor-behavioral reactions, and changes in the adequacy of cognitive functioning. After reviewing the work of several investigators, he concludes that stimuli producing stress reactions

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[1]For examples of works by Hans Selye, see: The Stress of Life (New York: McGraw-Hill Book Co., 1956); "The Evolution of the Stress Concept," American Scientist 61 (November-December 1973): 692-99; and Stress Without Distress (Philadelphia: Lippincott, 1974).

[2]H. Rudolph Schaffer, "Behavior Under Stress: A Neurophysiological Hypothesis," Psychological Review 61 (September 1954): 323.

[3]Ibid., 324.

can be categorized as follows: (1) uncertainty regarding physical survival, (2) threat to the maintenance of one's identity, (3) inability to control one's environment, (4) inability to avoid pain and deprivation, (5) disruption of community life, and (6) loss of [including separation from] loved ones.[1] Engel proposes similar inter-related categories: (1) loss or threat of loss of psychic objects, (2) injury to the body, and (3) frustration of drives.[2] Hospitalization potentially includes all of these stimuli.[3]

While stress in itself is not necessarily harmful, the individual who requires hospitalization can be deemed already under greater than normal stress as a cause and/or result of his illness. Munday suggests that "since the effects of stress . . . are cumulative, the removal of apparently insignificant sources of anxiety [stress due to hospitalization and treatment] may be a useful contribution to the overall situation."[4] Mason reasons that "the obvious (yet sometimes unacknowledged) means of reducing

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[1]Richard S. Lazarus, Psychological Stress and the Coping Process, p. 6.

[2]George L. Engel, "A Unified Concept of Health and Disease," Perspectives in Biology and Medicine 3 (Summer 1960): 481-2.

[3]Anne Munday, Physiological Measures of Anxiety in Hospital Patients, The Study of Nursing Care Project Reports, Series 2, No. 3, (London: Royal College of Nursing, 1973), p. 17.

[4]Ibid., p. 13. See also M. H. Appley and Richard Trumbull, eds., Psychological Stress: Issues in Research (New York: Appleton-Century-Crofts, 1967), p. 12. These authors also maintain that stressors may be additive, interact, or cancel. In Stress Without Distress, p. 73, Selye states that the effects of stress may continue after the cessation of the stressful stimuli.

potential trauma is to eliminate it."[1]

According to Cofer and Appley, stress involves an interaction between the individual and the environment.[2] Wolff expands on this thesis:

> The stress accruing from a situation is based in large part on the way the affected subject perceives it: perception depends upon a multiplicity of factors including the genetic equipment, basic individual needs and longings, earlier conditioning influences, and a host of life experiences and cultural pressures.[3]

Turner refers to crisis as a continuum in which the event and the state of the organism contribute in different amounts to the total "severity".[4] The same two factors may be assumed to contribute to the broader concept of stress, of which ordinarily crisis is a severe form.

Wright similarly refers to another aspect of stress, anxiety, as "situational" or "basic". Situational anxiety refers to a temporary interference with one's ability to problem solve or adapt to a new experience, while basic anxiety denotes a consistently low

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[1]Edward A. Mason, "The Hospitalized Child--His Emotional Needs," 409.

[2]C. N: Cofer and M. H. Appley, Motivation: Theory and Research (New York: John Wiley and Sons, Inc., 1964), p. 451.

[3]Harold G. Wolff, Stress and Disease (Springfield, Ill.: Charles C. Thomas, 1953), p. 10.

[4]Robert J. Turner, "Social Structure and Crisis: A Study of the Effects of Differing Organizations of Nursing Services Upon the Adjustment of Hospitalized Patients," (Ph.D. dissertation, Syracuse University, 1964), p. 61.

ability to relate to people and assimilate experience.[1] Wright's situational and basic anxiety are similar to Spielberger's "state" and "trait" anxiety categories. An anxiety "state" is characterized by "subjective, consciously perceived feelings of apprehension and tension . . ."[2] which may be initiated by external or internal stimuli. "Anxiety trait" implies a personality disposition that ". . . predisposes an individual to perceive a wide range of objectively nondangerous circumstances as threatening . . . ."[3] The literature would seem to indicate that for most patients, most anxiety related to the hospitalization experience is "state" anxiety.

Field presents a long list of stress-inducing situations associated with hospitalization, including strangeness of life on the ward, lack of understanding and fear of hospital procedures, enforced dependence, fear of surgery, suffering, and death, feelings of exclusion and hopelessness, and threat to family relationships.[4]

Satisfaction and the Hospitalization Experience

Very little has been written regarding positive aspects of hospitalization. Studies related to satisfaction have generally

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[1]Morgan W. Wright, "A Study of Anxiety in a General Hospital Setting," Canadian Journal of Psychiatry, 8 (December 1954): 202.

[2]C. D. Speilberger, Anxiety and Behavior, (New York: Academic Press, 1966), p. 17.

[3]Ibid.

[4]Minna Field, Patients are People: A Medical-Social Approach to Prolonged Illness (New York: Columbia University Press, 1953), pp. 54ff.

focused on reaction to nursing care. Raphael interviewed 498 patients in four British general hospitals. Seventy-three per cent reported conditions were "very satisfactory". Respondents were asked to report the most important change they would make in the care if they could. Fifteen percent would have improved the physical care of patients, twenty-six percent wanted changes in the physical environment, and fifty-nine percent wanted changes related to life in the hospital.[1]

Abdellah and Levine polled 8,700 patients in fifty-seven hospitals, and found that, with the exception of obstetrical patients, respondents were more satisfied with nursing care in hospitals where the hours of professional nursing care per patient were higher. They suggest that these hospitals may have had a more patient-centered approach to nursing care than hospitals providing a smaller proportion of nursing care, and that such an approach ". . . perhaps is the real determinant of patient satisfaction with care."[2]

In a recent American study, Daeffler compared patients' perceptions of care under two different schemes of nursing organization, team and primary nursing. A total of 82 patients

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[1]Winnifred Raphael, "Do We Know What the Patients Think? A Survey Comparing the Views of Patients, Staff and Committee Members," International Journal of Nursing Studies 4:3 (1967): 209-223.

[2]Faye G. Abdellah and Eugene Levine, Effect of Nurse Staffing on Satisfactions With Nursing Care, Hospital Monograph Series No. 4 (Chicago: American Hospital Association, 1958), p. 32.

were polled. The findings lent support to the investigator's hypothesis that less omissions in nursing care would be reported when the pattern of care was primary nursing, although the instrument was reported to have limited value for measuring satisfaction with care.[1]

Rose suggests that satisfying experiences (or "gratification") can constitute a means of coping with stress. Gratification is defined as the use of self, people, and environmental objects to "experience pleasure and enjoyment."[2] In Rose's study, the proportion of total experiences which were gratifying for a child in hospital was smaller than the proportion of gratifying experiences at home.[3]

The Relationship of Stress and Satisfaction

Selye has described stress as a phenomenon that may be present in either pleasant or unpleasant experiences.[4] Given Selye's important distinction, the investigator would underline that in this study she is identifying stress in the "distress" and negative sense rather than as a factor associated with both pleasant and unpleasant experiences.

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[1]Reidun J. Daeffler, "Patients' Perception of Care Under Team and Primary Nursing," Journal of Nursing Administration 5 (March-April 1975): 20-26.

[2]Marion H. Rose, "The Effects of Hospitalization on the Coping Behavior of Children," (Ph.D. dissertation, University of Chicago, 1972), p. 19.

[3]Ibid., p. 25.

[4]Selye, Stress Without Distress, p. 33.

The absence of all stress is not a desirable state, for such an existence would offer no stimulation whatever. What is desirable is a level of stress that maximizes the constructive and minimizes the destructive aspects of stress. As Selye puts it, ". . . each individual must find his own most comfortable stress-level."[1]

The nature of anxiety, or distress, has already been referred to as resulting from either the situation or the personality predisposition. And while these classifications can be regarded as "types" of anxiety, they can also be regarded as "sources", an interpretation of practical relevance to the selection of nursing interventions aimed at anxiety modification.

In the nursing literature, Menke classified children's perceptions of situations as "stressful" or "non-stressful". However, it cannot be assumed that "non-stress" is equivalent to satisfaction. In his classic work on job satisfaction, Herzberg maintains that the opposite of satisfaction is not dissatisfaction, but no satisfaction: satisfaction and dissatisfaction are two "separate and distinct" factors.[2]

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[1]Selye, Stress Without Distress, p. 73.

[2]Frederick Herzberg, Work and the Nature of Man (Cleveland and New York: World Publishing Company, 1966), pp. 75-6.

Stress and Satisfaction as Related to the Child's Hospitalization Experience

Illness and hospitalization are commonly recognized as stressful situations for the child.[1] His general reactions to hospitalization, irrespective of the nature of his illness, are related to a number of factors, such as his developmental stage. Specific reactions are more likely to be related to the individuality of the child and the nature and severity of his illness.

The child is especially prey to the consequences of stressful stimuli: ". . . he is in a dependent position, he has fewer social roles and differentiated behavior patterns to help him meet a problem, and his life is not so sharply divided into as many areas . . . as that of an adult."[2]

The factors thought to influence substantially the child's reactions to hospitalization are many and varied. Age and developmental stage are commonly mentioned.[3] In children under four years, separation from parents is cited as the major concern.[4] The

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[1] See Terence Moore, "Stress in Normal Childhood," Human Relations 22 (June 1969): 235-50; and Melvin Lewis, Clinical Aspects of Child Development (Philadelphia: Lea & Febiger, 1971), pp. 185-9.

[2] Lazarus, Psychological Stress and The Coping Process, p. 22, cites this quotation from W. Caudill, Effects of Social and Cultural Systems in Reactions to Stress (New York: Social Science Council Pamphlet 14, 1958).

[3] See Sula Wolff, Children Under Stress (London: Allen Lane Penguin Press, 1969), p. 55, as an example.

[4] Evelyn K. Oremland and Jerome D. Oremland, eds., The Effects of Hospitalization on Children: Models for Their Care (Springfield, Ill.: Charles C. Thomas, 1973), p. 68.

school-age child tends to regress, fears loss of control, and potential harm to his emerging body image.[1] Early adolescents are prone to homesickness and boredom.[2] "Anxiety is heightened when the special vulnerabilities of a particular developmental struggle are touched upon."[3] For example, surgery may elicit fears of castration. Blom found in a study of 143 tonsillectomy patients aged two to fourteen years, that the focus of anxiety shifted from the hospitalization experience itself in the young child, to operations, needles, and narcosis in the older child.[4]

Another major group of factors related to the child's reaction to hospitalization relates to the parents: the meaning of the illness to the parents and child, the parents' reaction to the child's illness; and the child-parent relationship all have implications.[5]

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[1]Dane G. Prugh, "Emotional Aspects of the Hospitalization of Children," in Red is the Color of Hurting: Planning for Children in the Hospital, ed. Milton F. Shore (U.S. Department of Health, Education and Welfare, Public Health Servi e, 1965), p. 21. See also Oremland and Oremland, The Effects of Hospitalization on Children, p. 68.

[2]Lois Jones Hopkins, "Self Attitudes of Hospitalized Adolescents," (Cleveland, Ohio: Case Western Reserve University, 1971), p. 9. (Mimeographed).

[3]Lewis, Clinical Aspects of Child Development, p. 189.

[4]Gaston E. Blom, "The Reactions of Hospitalized Children to Illness," Pediatrics 22 (September 1958): 594.

[5]Lewis, Clinical Aspects of Child Development, p. 185. See also William S. Langford, "The Child in the Pediatric Hospital: Adaptation to Illness and Hospitalization," p. 669-70; and Florence Bright, "The Pediatric Nurse and Parental Anxiety," Nursing Forum 4:2 (1965): 30-48.

Several researchers have concluded that the child's emotions and behavior are directly influenced by the mother's stress level. Skipper and Leonard conducted a study in which an experimental group of mothers of tonsillectomy patients were given supportive nursing care. Physiological stress measures were much lower for children of experimental mothers than for the control group. Mothers' post-discharge reports of the children's behavior also favored the experimental group.[1] Mahaffy, in an earlier similar study reported essentially the same results.[2] In a recent study, children and parents were given special support at six potentially stressful periods during hospitalization. The experimental group exhibited less emotional distress and better adjustment than the control group according to several different measures, including blind observer ratings of behavior and cooperation, physiological measures, post-hospital adjustment, and mothers' satisfaction.[3]

A third set of factors related to the child's reaction to hospitalization is preparation and previous hospitalization experience. Gofman et al. interviewed one hundred children between three and fifteen years. They found that only one-quarter were

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[1] James K. Skipper and Robert C. Leonard, "Children, Stress and Hospitalization: A Field Experiment," Journal of Health and Social Behavior 9 (December 1968): 275-87.

[2] Perry R. Mahaffy, "The Effect of Hospitalization on Children Admitted for Tonsillectomy and Adenoidectomy," Nursing Research 14 (Winter 1965): 12-19.

[3] Madelon A. Visintainer and John A. Wolfer, "Psychological Preparation for Surgical Pediatric Patients: The Effect on Children's and Parents' Stress Responses and Adjustment," Pediatrics 56 (August 1975): 187-202.

adequately prepared for hospitalization, and only twenty-five percent understood their illness.[1] Vernon suggests that the harmful effects of the unfamiliarity of the hospital can be partially mitigated by psychological preparation of the child.[2] Wolff states that previous traumatic experiences increase hospitalization distress.[3]

Menke, in the study referred to above, found that the only two variables which significantly influenced children's perceptions of stress were preparation for hospitalization and length of hospitalization.[4] However, her methodology makes her findings inconclusive. Picture cards of potential stressors were presented to the children, whose responses were analyzed in terms of stressful or non-stressful reaction to the images. The concepts depicted were highly general, including such stimuli as "mother, father, boy, girl, house, cat, and dog" which bear little relationship to the hospitalization experience as such. In addition, the pictures were fairly stylized line drawings, which, in this investigator's opinion, may have been ambiguous to the child. For example, the pictures of "mother" and "father" could very easily have been interpreted as grandparents.

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[1]H. W. Gofman, Wilma Buckman, and George H. Schade, "The Child's Emotional Response to Hospitalization," American Journal of Diseases of Children 93 (February 1957): 157-8.

[2]Vernon et al., The Psychological Responses of Children to Hospitalization and Illness, p. 8.

[3]Wolff, Children Under Stress, p. 58. See also Care of Children in Hospitals (Evanston, Ill.: American Academy of Pediatrics, 1960), p. 53.

[4]Menke, "Factors Related to Children's Perception of Stress in the Hospital."

Some interesting work is being done by Stainton, who has developed a hospital orientation program for preschoolers in Calgary. A preliminary study indicated that non-threatening exposure to the hospital setting while the child is "well" has positive effects on his adjustment should he later require hospitalization.[1]

The nature and severity of the illness also influence the child's reaction. For instance, an immobilizing condition "heightens the feeling of vulnerability,"[2] and enforces dependency.

The final group of factors highly relevant to the study reported here relate to hospital policies and procedures. Many common nursing procedures are stress-invoking. Needles, removal of stitches and bandages, surgery and anesthesia are a few examples.[3] Hospital policies and unfamiliar routines may add to the child's distress. Chapman et al. suggest that the stress of hospitalization is due largely to the subjection of the child to the same routine and management as an adult.[4] Limited play, limited school activities,

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[1]Colleen Stainton, "Preschoolers' Orientation to Hospital," Canadian Nurse 70 (September 1974): 38-40.

[2]Florence Erickson, "Stress in the Pediatric Ward," Maternal-Child Nursing Journal 1 (Summer 1972): 114; Elizabeth Gellert, "Reducing the Emotional Stresses of Hospitalization for Children," p. 126.

[3]Erickson, "Stress in the Pediatric Ward," cites many more examples of stressful procedures.

[4]A. H. Chapman, Dorothy Loeb, and Mary Jane Gibbons, "Psychiatric Aspects of Hospitalizing Children," Archives of Pediatrics 73 (March 1956): 78.

and limited contact with family all play a part in causing stress.[1]

As indicated in the Introduction, there is very little mention in the literature of satisfying situations related to the hospitalization of children. Rose, in the study cited above, found that the magnitude of a child's behavior change in hospital was related to his capacity to find relief in "gratifying experiences." She also found that the greater proportion of gratifying experiences was related to factors other than the child himself.[2] Dimock suggests that the child has an exaggerated need for experiencing trust, autonomy, and initiative when hospitalized.[3] The importance of providing the patient with positive experiences is emphasized by Hall, who states that:

> Through the process of professional nursing, the patient has the opportunity of making his illness a learning experience from which he may emerge not merely as he was before he sickened, but healthier physically and psychologically than he ever was before his illness.[4]

While Hall's major goal is that of creating a healthier individual, and while one cannot assume that satisfaction in itself is a "sufficient" condition for health to exist, it would seem reasonable to assume that satisfaction is a "necessary" condition of health.

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[1] Lucy Kunzman, "Some Factors Influencing a Young Child's Mastery of Hospitalization," p. 15.

[2] Rose, "The Effects of Hospitalization on the Coping Behaviors of Children," p. 162.

[3] Dimock, The Child in Hospital, p. 63.

[4] Lydia E. Hall, "Another View of Nursing Care and Quality," in Continuity of Patient Care: The Role of Nursing, ed. K. M. Straub and Kitty S. Parker (Washington, D.C.: The Catholic University of America Press, 1966), p. 53. (Emphasis mine).

Logically, then, nurses ought to be aware of situations which are perceived as satisfying by patients.

The importance of play is emphasized by Petrillo and Sanger, not specifically as a means of providing satisfying experiences, but as a means of decreasing the effects of stress:

> Play restores, in part, normal aspects of living and prevents further disturbance. Also, it provides the child with the opportunity to reorganize his life; thus, it reduces anxiety and establishes a sense of perspective.[1]

Oakshott lists a number of methods of "absorbing stress", such as play groups, stories, and games.[2]

The Patient's Perceptions

According to Pierce, any health-care system model which purports to measure the quality of care "must include the patient."[3] Wu includes the perceptions of the patient as valuable input for the provision of quality nursing care:

> How the individual experiences his illness is the important determinant of his behavior, and as such becomes content for nursing. When the individual's perception of his illness is incongruent with the objective data given to us by medical science, efforts may be directed . . . towards changing his perception so that it is more consistent with reality.[4]

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[1]Madeline Petrillo and Sirgay Sanger, Emotional Care of Hospitalized Children: An Environmental Approach (Philadelphia: J. B. Lippincott Company, 1972), p. 99.

[2]Edna Oakshott, The Child Under Stress (London: Priory Press Limited, 1973), p. 49.

[3]Lillian Pierce, "A Patient-Care Model," American Journal of Nursing 69 (August 1969): 1700.

[4]Ruth Wu, Behavior and Illness (Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1973), p. 31.

In other words, the patient's perceptions are not necessarily "realistic" in terms of someone else's assessment of the situation, but unless they are understood, the patient's behavior may be incomprehensible to the nurse.

> To each of us the perceptual field of another person contains much error and illusion; it seems an interpretation of reality rather than reality itself; but to each individual, his perceptual field is reality; it is the only reality he can know.[1]

Yet, in spite of the obvious importance of the patient's perceptions of his situation, the patient is often left out of the care planning process. Feldman has stated that:

> The patient is avoided as a direct source of information because he presents many difficult data gathering problems despite the fact that much of the evaluation effort is theoretically and philosophically focused on the patient.[2]

In a study by Duff and Hollingshead, it was found that only fifteen percent of registered nurses in an Eastern United States medical center caring for patients in private wards "had any idea about the attitude of ill persons to their illness." The proportion dropped to six per cent on semi-private wards and zero on public wards. In the same study, only five per cent of practical nurses on private wards, and two per cent on semi-private and public wards, knew what patients understood about their illness.[3] In another

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[1]Combs and Snygg, Individual Behavior, p. 21.

[2]Herman Feldman, "Validity of a Feedback System for Evaluation of Pediatric Nursing Care," Nursing Research 14 (Summer 1965): 258.

[3]Raymond S. Duff and August B. Hollingshead, Sickness and Society (New York: Harper and Row, 1968), p. 227.

study, Dye found that thirteen out of fourteen adult medical-surgical patients expressed adverse reactions to the hospital setting, and all thirteen had misunderstandings about their illness, treatment, or diagnosis, or adverse reactions to delays in nursing help or treatments.[1] Similar findings are reported by Volicer and Bohannon. In a study of 261 medical-surgical patients, they found that lack of communication of information and lack of meaningful communication on the part of hospital staff were perceived as very stressful.[2]

Macgregor emphasizes the importance of understanding the patient's perceptions:

> In a hospital where maximum care and rehabilitation are dependent upon understanding the whole patient, erroneous judgements may have far-reaching effects. Personality assessment based on preconceptions, superficial observations, flash impressions, and so forth can have consequences that are incompatible with the major objectives of total patient care.[3]

The importance of the patient's perceptions is accentuated when the patient is a child. Solley and Murphy state that perception is "more closely knit with affective processes in children than in

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[1]Mary C. Dye, "Clarifying Patient's Communications," American Journal of Nursing 63 (August 1963): 57.

[2]Beverly J. Volicer and Mary Wynne Bohannon, "A Hospital Stress Rating Scale," Nursing Research 24 (September-October 1975): 358.

[3]Frances Cooke Macgregor, Social Science in Nursing: Applications for the Improvement of Patient Care (New York: Russell Sage Foundation, 1960), p. 184.

adults."[1] Children up to ten years of age perceive items largely in terms of the surrounding context.[2] Thus the importance of the hospital environment is heightened for the child.

Belmont asserts that:

> The responses of a child to his illness are usually not determined by its actual severity. More significant are his own fantasies and interpretations of his illness, the stage of his personality development at that time, the degree of personality organization and development he has achieved, and the characteristic methods of defense against anxiety he has developed during his lifetime.[3]

In summary thus far, hospitalization is a potentially stressful experience for any individual, and especially for the child. Satisfaction as part of hospitalization has been studied less extensively than stress, but nevertheless, potentially and ideally, it is part of the total experience of the patient. A crucial consideration in studying the patient's reaction to hospitalization is the perception of the patient, particularly if that patient is a child.

Literature Related to Implications of the Study for Nursing Care

Analysis of nursing care can logically be divided into three broad categories: structure, process, and outcome.[4] Structure refers

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[1]Charles M. Solley and Gardner Murphy, Development of the Perceptual World (New York: Basic Books, 1960), p. 126.

[2]Ibid., p. 138.

[3]Herman S. Belmont, "Hospitalization and its Effects Upon the Total Child," Clinical Pediatrics 9 (August 1970): 477.

[4]Avedis Donabedian, "Some Issues in Evaluating the Quality of Nursing Care," American Journal of Public Health 59 (October 1969): 1833.

to organizational components of care, such as physical facilities and manpower.[1] From a nursing viewpoint, structure includes such factors as the nursing organization, types and numbers of nursing personnel, and nursing policies. These variables may also be called "nursing input".

"Outcomes" include the effects of the nursing input and process on the alteration of the health status of the patient.[2]

The concept of "process", or more specifically, "nursing process", includes those activities in which the nurse engages while caring for the patient. Process has been sub-divided into a number of different steps by various authors. Stevens, basing her classification on the medical model, includes five steps in the nursing process: patient assessment, goal setting, therapy planning, care implementation, and care plan evaluation.[3] Ramey includes assessment, planning, intervention, and evaluation in her model.[4] The elements of nursing process are identified as observation, inference, validation, assessment, action, and evaluation by Carrieri

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[1] Ibid.

[2] Helen V. Berg, "Nursing Audit and Outcome Criteria," Nursing Clinics of North America 9 (June 1974): 331-5.

[3] Barbara Stevens, The Nurse as Executive (Wakefield, Mass: Contemporary Publishing Inc., 1975), pp. 120-1.

[4] Irene G. Ramey, "Setting Nursing Standards and Evaluating Care," Journal of Nursing Administration 3 (May-June 1973): 30.

and Sitzman.[1] Orlando maintains that nursing process is the interaction of patient behavior, the nurse's reaction, and the nursing actions designed for the patient's benefit.[2] Three steps are delineated in Orem's conception of the nursing process: "determining why a person needs nursing, designing a system of nursing assistance, and providing and controlling the delivery of nursing assistance . . . ."[3] Bloch proposes a five-step model including collection of data, definition of the problem, planning of the intervention, implementation, and evaluation of the intervention.[4]

While different terminology is employed, all the above models have a common element. In each case, the nurse takes deliberate action on the basis of her assessment of the patient. This assessment is based on observation of the patient's verbal and non-verbal behavior, as well as information from relevant others, and her own knowledge. The investigator contends that in order for the nurse to verify the inferences she makes on the above bases, she must compare her perceptions with the patient's perceptions of any given situation before proceeding with a plan for nursing interven-

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[1]V. K. Carrieri and J. Sitzman, "Components of the Nursing Process," in The Nursing Process, ed. Ann Marriner (Saint Louis: C. V. Mosby Co., 1975).

[2]Orlando, The Dynamic Nurse-Patient Relationship, (New York: G. P. Putnam's Sons, 1961), p. 36.

[3]Dorothea E. Orem, Nursing: Concepts of Practice (New York: McGraw-Hill Book Company, 1971), p. 157.

[4]Doris Bloch, "Some Crucial Terms in Nursing: What do They Really Mean?" Nursing Outlook 22 (November 1974): 689-94.

tion. If this comparison is inaccurate or omitted, she may well fail in identifying the patient's problems and therefore in meeting his needs. Brown, a highly recognized analyst of nursing, concurs that such failure may occur. She states that ". . . two sets of perceptions can exist parallel to each other, those of patients and those of staff . . . patients and staff live in two separate social worlds . . . ."[1]

Several other authors suggest that nurses may fail to adequately understand the patient's perceptions. Wolff maintains that health professionals find caring for ill children stressful or anxiety-producing. In order to cope with their own anxiety, they frequently develop an attitude of "clinical detachment", which, she maintains, is equivalent to denial of the emotional implications for the child of illness and hospitalization.[2] The actual organization of the nursing service "militates against close and prolonged contact between the individual patient and nurse. . .", according to Menzies.[3]

In the face of potential failure to provide essential psychological support, the nurse should be extremely sensitive to the patient's perceptions. Erickson states forcefully that ". . . an

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[1]Esther Lucile Brown, Newer Dimensions of Patient Care, Part I: The Use of the Physical and Social Environment of the General Hospital for Therapeutic Purposes (New York: Russell Sage Foundation, 1961), p. 23.

[2]Wolff, Children Under Stress, pp. 51-2.

[3]Isabel E. P. Menzies, "Nurses Under Stress," International Nursing Review 7 (December 1960): 10.

understanding of how children perceive hospitalization, surgery, and all the supportive tests and treatments involved is basic for all those who work with children in hospitals."[1] The investigator would carry Erickson's statement one step further: developing general understandings about children's perceptions is not enough; it is a basic requirement of quality nursing to identify how the individual child perceives hospitalization, with all that those perceptions imply.[2] Unless this first step of identifying the individual's perceptions is taken, other steps taken to individualize nursing care will be based on highly incomplete information, if not on totally shaky ground.

Selected Literature Relevant to the Research Approach

In this section, literature pertaining to the nature of the research approach, and the method of collecting and analyzing the data will be briefly reviewed.

The Nature of an Inductive Exploratory Study

It was stated in chapter I that this study was exploratory in nature. The investigator did not attempt to formulate formal hypotheses and then determine whether the data fit the model, but

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[1] Erickson, "Stress in the Pediatric Ward," p. 116. (Emphasis mine).

[2] See Genevieve Burton, Personal, Impersonal and Interpersonal Relations: A Guide for Nurses, 3rd Edition (New York: Springer Publishing Company, Inc., 1970), p. 10. Burton agrees with the necessity of identifying individual perceptions. Dorothea E. Orem, "Discussion of Paper: Another View of Nursing Care and Quality," in Continuity of Patient Care: The Role of Nursing, eds. K. M. Straub and Kitty S. Parker (Washington: The Catholic University of America Press, 1966), p. 64, makes a similar point.

rather, proposed loosely formulated research questions, with the objective of developing substantive knowledge about the research questions on the basis of the data obtained.[1] As such, the research approach was largely inductive rather than deductive. An inductive study proceeds from definition of a problem, through collection of information and analysis, to a general conclusion or principle, in contrast to a deductive approach, which begins with a general principle and determines whether it applies to a specific situation.[2]

Francis Bacon described the inductive approach eloquently in 1620:

> But the true method of experience . . . first lights the candle, and then by means of the candle shows the way; commencing as it does with experience duly ordered and digested, not bungling or erratic, and from it deducing axioms, and from established axioms again new experiments; . . .[3]

He further stated:

> . . . by successive steps not interrupted or broken, we rise from particulars to lesser axioms; and then to middle axioms, one above the other; and last of all to the most general.[4]

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[1]This method is characteristic of exploratory studies, as noted in the International Encyclopedia of the Social Sciences, s. v. "Content Analysis," by Matilda White Riley and Clarice S. Stoll.

[2]Thora Kron, Communication in Nursing (Philadelphia and London: W. B. Saunders Company, 1967), pp. 60-63.

[3]Francis Bacon, "The New Organon, [1620]," The Complete Essays of Francis Bacon, with an Introduction by Henry Le Roy Finch (Washington: Washington Square Press, Inc., 1963), p. 224.

[4]Ibid., p. 242.

In this study the investigator considered the "particulars", and claims to rise no higher than the "lesser axioms".

The extreme form of the modern inductive study is the grounded theory approach propounded by Glaser and Strauss. "Grounding" or "generating" a theory implies that

> . . . most hypotheses and concepts not only come from the data, but are systematically worked out in relation to the data during the course of the research.[1]

Data are gathered and analyzed concurrently; more data are gathered as categories emerge; hypotheses are formed concurrently. This process is a cyclical one that continues until hypotheses are refined to a testable level.

The approach to the present study might be considered a modified grounded theory approach. Unlike the grounded theory approach, guiding questions were formulated prior to the data collection, and analysis was begun only after all the data were collected. However, the findings, rather than attempting to verify pre-stated hypotheses, were utilized to draw conclusions related to the guiding questions, and suggest further directions for study.

Content Analysis

Lazarfeld and Barton aptly pinpoint a major problem facing the researcher in an exploratory study:

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[1] Barney G. Glaser and Anselm L. Strauss, The Discovery of Grounded Theory: Strategies for Qualitative Research (Chicago: Aldine Publishing Company, 1967), p. 6.

> . . . the researcher will be faced by an array of raw data for which ready-made theoretical categories will not exist.[1]

The process of translating raw data into categories which are amenable to analysis is known as content analysis.

While content analysis is a technique widely used in current research, and while there are many recent content analysis type studies reported in the literature, the explication of content analysis methods tended to fall into the literature of the 1950's. Most of the authorities cited below in reference to this technique therefore date to that decade. One of the most well-known early proponents of content analysis, Bernard Berelson, defines the process as:

> . . . a research technique for the objective, systematic, and quantitative description of the manifest content of communication.[2]

Later theorists questioned the necessity of limiting content analysis to "quantitative" description and "manifest" content. Mahl defines two distinct models of content analysis. The "representational model" . . . assumes the face validity of the manifest lexical content of a message."[3] In other words, if the

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[1]Paul F. Lazarfeld and Allen H. Barton, "Qualitative Measurement in the Social Sciences: Classification, Typologies, and Indices," in The Policy Sciences: Recent Developments in Scope and Method, eds. D. Lerner and H. D. Lasswell (Stanford, Calif.: 1951), p. 156.

[2]Bernard Berelson, "Content Analysis," in Handbook of Social Psychology, Vol. I, ed. Gardner Lindzey (Reading, Mass.: Addison-Wesley, 1954), p. 489.

[3]George F. Mahl, "Exploring Emotional States by Content Analysis," in Trends in Content Analysis, ed. Ithiel de Sola Pool (Urbana: University of Illinois Press, 1959), p. 89.

speaker says he is frightened, he is frightened. The second model is the "instrumental model." In this model, language is seen to function "principally as instrumental behavior."[1] The instrumental model is also referred to as "pragmatic" content analysis: the language is classified according to its probable causes or effects.[2]

The question of quantitativeness is taken up by George. He characterizes quantitative analysis as a "rigid" procedure for making content-descriptive observations, while qualitative analysis is a "flexible" procedure for doing the same thing. He further differentiates between frequency and non-frequency analysis, which are independent of qualitative or quantitative characteristics. While frequency analysis makes inferences on the basis of how often a characteristic is present, non-frequency analysis makes inferences on the presence or absence of a characteristic, regardless of its frequency.[3]

Validation of Content Analysis

The process of content analysis requires the analyst to judge "meanings which are attributed to the sign-vehicles [words] in

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[1] Mahl, "Exploring Emotional States by Content Analysis, p. 90.

[2] See Irving L. Janis, "The Problem of Validating Content Analysis," in Language of Politics, eds. Harold D. Lasswell et al. (New York: George W. Stewart, Publisher, Inc., 1949), p. 57; and Louis A. Gottschalk and Goldine C. Gleser, The Measurement of Psychological States Through the Content Analysis of Verbal Behavior (Berkeley and Los Angeles: University of California Press, 1969), p. 7.

[3] Alexander L. George, "Quantitative and Qualitative Approaches to Content Analysis," in Trends in Content Analysis, ed. Ithiel de Sola Pool (Urbana: University of Illinois Press, 1959), pp. 7-32.

a communication by . . . a given communicator."[1] Janis gives a detailed account of the types of errors which may occur in such a procedure. These errors are briefly classed as systematic errors, resulting from faulty classification due to poor procedural rules, and spurious errors, resulting from incorrect classification in borderline cases. A validation method is needed if one is to put any faith in the results of the analysis.

The relationship of the communicator's verbal behavior, which is classified in content analysis, and his non-verbal behavior, poses difficulties.[2] Does what he says have any bearing on his behavior? Janis suggests that validity may be indirectly inferred by the results yielded by content analysis which are correlated with other variables:

> If one is able to show that a content analysis procedure provides results which are correlated with many types of pragmatical responses of sign-interpreters [behavioral effects of the communication], then it may be concluded that the content analysis procedures correctly describe the signification responses of those sign-interpreters.[3]

For example, if it can be shown that reports of high stress are linked to behaviors indicating high stress, the content analysis procedure would be considered valid. He further maintains that:

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[1] Janis, "The Problem of Validating Content Analysis," p. 81.

[2] Frank Auld and Edward J. Murray, "Content-Analysis Studies of Psychotherapy," Psychological Bulletin 52:5 (1955): 380.

[3] Janis, "The Problem of Validating Content Analysis," pp. 70-1. For a detailed description of the reasoning behind this assertion, see Janis' article.

> . . . correlations between two classes of sign-vehicles [words] can be explained by inferring that each class has a certain common signification for the communicator, and that there is a functional relationship between these two classes of signification in the behavior of the communicator. Therefore, correlations among content characteristics and a pragmatical response, provide indirect evidence of the validity of a content analysis procedure.[1]

Thus, the more relationships that can be established between content characteristics, "the higher the probability that the procedure estimate [sic] signification responses correctly, and hence the higher the degree of validity."[2]

Within the above principles and considerations, a qualitative, non-frequency content analysis procedure was chosen for this study.

Summary of Literature Review

Both the physiological and psychosocial aspects of stress have been widely studied. Hospitalization has been well documented as a potentially stressful situation for the individual. On the other hand, little has been learned about potentially satisfying experiences related to hospitalization. Stress and satisfaction may be regarded as separate but not independent continua.

The literature indicates conclusively that the hospitalization experience is particularly stressful for the child. Many factors are thought to influence his reactions; his age and

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[1] Janis, "The Problem of Validating Content Analysis," pp. 73-4.

[2] Ibid., p. 81.

developmental stage, parental reactions and relationships, previous hospitalization experiences, preparation, the nature and severity of the illness, and hospital policies and procedures, are some of the more commonly cited factors.

The individual's reported perceptions of his hospitalization are of paramount importance in determining his reactions to the hospitalization experience. The effect of perception on behavior is exaggerated in children. To provide effective individualized patient care, the nurse must take into account the perceptions of the individual patient.

It is noted that the bulk of the literature pertaining to the effects of hospitalization on children falls in the 1950's and 1960's. Less has been written in the 1970's.

In the final section of the literature review, the inductive approach used in this study and the major analytical technique of content analysis have been briefly described.

CHAPTER III

METHODOLOGY

Research Design

As stated in chapter I, the primary focus in the study was that of determining the extent to which there was or was not agreement between the hospitalized child's perceptions of stressful and satisfying situations, and the nurse's identification of the child's perceptions. The research design used was simply a one-time report of the child's perception of stress and satisfaction (O), and a one-time report of the nurse's identification of that stress and satisfaction (A).

O_1

A_1

Figure 1
The Research Design

Independent and Dependent Variables

There were two sets of independent and dependent variables used in the study. In the primary analysis, the child's reported perceptions were treated as the independent variable, while the nurse's identification of the child's perceptions was the dependent variable.

In the secondary analysis the investigator attempted to ascertain the predictive value of demographic, organizational, and illness-related factors (the independent variables) in determining the child's and nurse's reported perceptions (the dependent variables).

Early Beginnings of the Study

This study was conducted in the pediatric units of five general acute-care hospitals, and in two pediatric hospitals. The five general hospitals included all hospitals with pediatric units located in Edmonton; one of the pediatric hospitals served long-term patients from the northern part of Alberta; the other served long and short-term patients from southern Alberta.

The investigator initially sent a letter requesting permission for the study to the Director of Nursing in each hospital. The study was then explained to the supervisor(s) and head nurse(s) of the pediatric units involved. Sample questionnaires were made available for discussion. Finally, the investigator met with as many of the day staff as possible from each of the units involved, explained the purpose and nature of the study, and answered any questions pertaining to it.

An "optional" information letter for parents and physicians was made available to each hospital.[1] Three hospitals distributed the parent information letter to all parents of eligible children at the time of admission. One hospital required a signed consent

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[1]These letters are found in appendix I.

from each parent, and three hospitals with a majority of long-term patients felt no consent or letter was necessary. Two hospitals required signed consents from each child's attending physician, one hospital requested information letters be sent to all physicians, and four hospitals decided to advise the chief of pediatrics only regarding the study.

Population

The population from which the sample was drawn included all inpatients in the pediatric units of the five general-acute hospitals and the two pediatric hospitals during the five week study, with the restrictions noted below.

The study was restricted to children between the ages of six and twelve, inclusive. This age group approximates the age-range of elementary school children. Children under the age of six were excluded because a technique other than direct interviewing such as presentation of pictures would have had to be developed to elicit responses; those over twelve were excluded because the investigator expected that their perceptions would likely be similar to adult perceptions, and also because the upper age limit for different pediatric units varied from twelve to fifteen.

Several other groups were excluded from the accessible population. Patients with a primary diagnosis of psychiatric disorder were omitted, due to the nature of their illness, as their reactions to hospitalization might differ systematically from the reaction of medical-surgical patients, yet the actual numbers of psychiatric patients would be insufficient to permit meaningful comparisons. Similarly, mentally retarded children were omitted.

Those patients with severe communication disorders or deafness, which made an interview situation unreliable and/or impractical, were excluded.

As the time period of the questions asked dealt with the preceding forty-eight hours, only children on the second or subsequent day of hospitalization were included. Children who were critically ill or recovering from anaesthesea were omitted at the discretion of the head nurse. As interviews were conducted after lunch, the last two above-named conditions effectively excluded short-term surgical patients, who were admitted one day, had surgery the next, and were discharged the following morning.

Those patients whose parents or physician refused consent were omitted. The requirement of consent posed constraints at only one hospital, where several children had to be excluded from the accessible population, not because consent had been refused, but because the nursing staff had not had time or had omitted to obtain consent from the parent and/or physician. Thus, in this hospital the accessible population was restricted to patients for whom parent and physician consents had been obtained, rather than from all patients who otherwise met the conditions of the study.

The accessible nursing population included those registered nurses, certified nursing assistants and orderlies, and child care workers who were employed on the units under study during the course of the research.

Sample

From the accessible population, a sample of seventy patients was randomly selected using a table of random numbers, over a five

week period. The number selected from each hospital was approximately proportional to the number of annual separations for that hospital, as shown in table 1.

TABLE 1
SAMPLE SIZE AS RELATED TO ANNUAL SEPARATIONS

Hospital	Total Separations*	Sample Size	Fraction of Total Separations
Hospital 1	1,988	21	.011
Hospital 2	1,377	15	.011
Hospital 3	1,026	10	.010
Hospital 4	962	9	.010
Hospital 5	935 (568)**	6**	.070 (.011)**
Hospital 6	429	5	.011
Hospital 7	not available***	4	

*These were 1973 figures for separations of children aged 6 to 12, the most recent annual data available at the time of the study.

**The sample for this hospital was small in comparison with total separations because of a very large volume of short-term surgery patients which were inaccessible due to the study design. 367 patients annually were discharged on the third day. If these patients were subtracted from the total separations, 568 would remain, making the sample proportion comparable to that of the other hospitals. (Mean length-of-stay in this hospital was 4.42 days, compared with a mean range of 5.58 to 17.12 days.)

***Exact figures for this hospital were not available. It is a long-term hospital, and the sample was virtually equivalent to the population of patients in the hospital. Separations would not accurately reflect population, as many patients remained for several years.

Two strata were included in the sample: short-term and long-term patients, as set out in the operational definitions above. Patients were randomly selected for these two strata from each hospital, again in approximate proportion to annual length-of-stay figures, as indicated in tables 2 and 3, so that the size of both strata would be equal. It was not possible to sample so as to obtain exact proportions, as some hospitals did not have sufficient turn-over of long-term patients during the five weeks of the study. Therefore, the sample of long-term patients was obtained from any hospital in which patients were available, keeping the strata sizes equal.

TABLE 2
SAMPLE SIZE OF SHORT-TERM STRATUM IN RELATION TO LENGTH-OF-STAY

Hospital	Annual Separations at 1-8 Days	Per Cent of Total Separations	Sample Size 1-8 Days	Per Cent of Total Sample
Hospital 1	1,674	84.2	17	81.0
Hospital 2	1,050	76.3	6	40.0
Hospital 3	885	86.3	7	70.0
Hospital 4	780	81.1	1	11.1
Hospital 5	852	91.1	2	33.3
Hospital 6	181	42.2	2	40.0
Hospital 7	0	0	0	0

TABLE 3
SAMPLE SIZE OF LONG-TERM STRATUM IN
RELATION TO LENGTH-OF-STAY

Hospital	Annual Separations at 9+ Days	Per Cent of Total Separations	Sample Size 9+ Days	Per Cent of Total Sample
Hospital 1	314	15.8	4	19.0
Hospital 2	327	23.7	9	60.0
Hospital 3	141	13.7	3	30.0
Hospital 4	182	18.9	8	88.9
Hospital 5	83	8.9	4	66.7
Hospital 6	248	57.8	3	60.0
Hospital 7	*		4	100.0

*No annual figures were available. All separations stayed 9 days or more.

In keeping with the descriptive nature of this study,[1] the sample described above was treated as the study population for purposes of analysis.

Research Instruments

Two instruments were used: an interview schedule for the child, and a questionnaire for the nurse. In addition, two supplementary information forms were used, one to obtain additional information about the child, and one to obtain additional information about the hospital.

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[1]The research approach employed in this study was described in detail in chapter 1.

Child Interview Schedule and Supplementary Information Sheet

A semi-structured, open-ended interview schedule was developed in consultation with an expert mental health consultant.[1] The child was requested to report situations occurring on the day of and the day previous to the interview which made him feel stressed or satisfied. Selltiz et al. state that "investigation of emotional reactions, if it is to provide a full picture, must uncover not only the individual's feelings but also the circumstances in which the feelings are likely to be aroused. Both can be studied most concretely by linking them to specific events in the subject's past."[2] The child was also asked to indicate which of the situations he related provided the most stress and satisfaction.

It was recognized that children are easily influenced by verbal and non-verbal cues. The schedule was so constructed as to minimize the interviewer's influence on the child. The interview was conducted according to the child's frame of reference that day: "Was today a good day or a bad day?" If the child responded positively, the positive aspects of the day's experiences were explored first, and vice versa. The order of presentation of the words "good" and "bad" was randomized to prevent possible bias due to a child's tendency to affirm the first adjective mentioned.

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[1]Helen Simmons, Ph.D., Mental Health Consultant, Local Board of Health, City of Edmonton. Dr. Simmons is a developmental psychologist and an expert in communications; her responsibilities include the training and evaluation of mental health nurse consultants.

[2]Selltiz et al., Research Methods in Social Relations, p. 248.

An open-ended interview was thought to be most appropriate for an exploratory study. Insufficient work has been done in the area to permit the use of a multiple-choice questionnaire. Regardless of that constraint, in that children seem particularly amenable to suggestion, presenting children with a pre-structured set of "stressful" and "satisfying" situations might well not be the preferred case, from the standpoint of greater validity.

Children were not assumed to be capable of reliably understanding the terms "stress" and "satisfaction", so emotive words at the child's level of understanding were substituted. "Happy", "good", and "pleased" were used to indicate satisfaction. "Unhappy", "sad", "bad", "afraid", and "upset" were used to indicate stress.[1]

Supplementary information about the child was obtained from the patient's chart and from observation. While it would have been interesting and possibly highly generative to include many more factors, such as the parent-child relationships and preparation for hospitalization, the variables finally selected on the basis of the literature,[2] the pre-test, and practical constraints were limited to: (1) age, (2) sex, (3) previous hospitalization, if any,

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[1]A study by Plutchik indicates that the number of descriptive terms used to indicate an emotion increases with age. He found that third grade children used the terms "happy" and "good" to express pleasure, while fifth graders added "merry", "fine", and "relaxed". The intent of the interview in this study was to use words understandable to all children. Robert Plutchik, The Emotions: Facts and Theories and a New Model (New York: Random House, 1962), p. 136.

[2]Refer to the Literature Review section on "Stress and Satisfaction as Related to the Child's Hospitalization Experience," p.23.

(4) reason for and child's reaction to previous hospitalization, (5) previous separation from parents if this was the first hospitalization, (6) diagnosis, (7) length of this hospitalization, (8) birth rank of child, (9) circumstances of admission, (10) proximity of child's home to the hospital, and (11) number of occupied and unoccupied beds in the child's room.[1]

Reliability and Validity

The reliability of the child's responses to the interview schedule was not rigorously established for the reasons discussed in chapter I.

Steps were taken to obtain at least a level of quasi-reliability. The child was asked to state his age, birth rank, and whether he had experienced previous hospitalization. These responses were then compared to the same information recorded on the patient's chart. If there were no discrepancies, the child himself was considered initially "reliable" in that the factual information he reported was accurate. In addition, at the end of each interview, the interviewer repeated the situations the child had reported, and waited for the child to confirm that each situation had indeed taken place and made him feel stressed or satisfied. However, it was possible that the child's mood at the time of interview and/or circumstances immediately preceding the interview may have caused responses which would not have been repeated if a re-interview had been attempted.

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[1]Copies of the child interview schedule and supplementary information sheet are found in appendix I.

While it was recognized that the establishment of construct validity was desirable, the methods required to establish this type of validity were not undertaken in this study. One such method which could have been used was to compare the child's reported perceptions of stressful and satisfying situations with observation of his actual behavior during those situations. Such a method, however, raised two problems: (1) the presence of an observer may have influenced the child's behavior, and (2) the investigator's time constraints were such that if each child had been observed for the time period about which he was questioned, the sample would have had to be reduced to a much smaller number. The advantages of a larger sample were felt to outweigh the advantages of an in depth approach using a very small sample.

Steps were taken to establish a degree of reliability and validity for the interview procedure itself. As mentioned earlier, the schedule was constructed in consultation with a mental health consultant who does extensive interview work with children. The investigator tape-recorded three series of pilot study interviews; each of these in turn was critiqued in detail by the consultant, until she was satisfied that the investigator's interview style, tone, responses, and speed would not introduce undue bias.

It was realized that children respond readily to and are easily influenced by both verbal and non-verbal cues. All interviews were conducted by the investigator, over as short a time period as possible, in an attempt to maintain consistency in interview style. Responses from the first and last third of the inter-

views were compared to obtain an estimate of internal consistency of interviewing technique over time.

Children may be afraid to indicate displeasure with their treatment because of fear of retribution, for example, from the nursing staff. To help overcome this tendency, the interviewer wore street clothes, and did not identify herself as a nurse or hospital-related worker. She was merely someone who was "interested in what it's like for you to be in the hospital."

Another possible source of invalidity was the possibility that the child was not reporting his own perceptions, but repeating things he had heard his parents say.[1] To minimize immediate parental influence, if parents were present when the interviewer arrived, they were asked to wait in the parents' room until the interview was completed.

Finally, the accuracy of a response can to some extent be determined by the amount of detail provided.[2] If an incident is described vaguely, one has doubts as to the accuracy of the account. The interviewer requested the child not only to describe the situation and how it made him feel, but also to report the day and time of day that it occurred, to establish more details about the incident. These details were then compared with the nurse's

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[1] E.g., Florence Bright says in "The Pediatric Nurse and Parental Anxiety", that parental anxiety is transmitted to the child. Melvin Lewis also supports the concept that children's reactions to hospitalization are influenced by parental reactions, in Clinical Aspects of Child Development, p. 185.

[2] John Flanagan, "The Critical Incident Technique," Psychological Bulletin 51 (July 1954): 340.

description of the same incident.

Nurse Questionnaire

An open-ended questionnaire was developed to ask nurses to identify situations in which they felt the child had been stressed or satisfied.[1] The terms "stress" and "satisfaction" were used, but elaborated by means of examples, following the experience of Fox and Diamond.[2] One page allowed sufficient space to report two situations. Additional sheets were available to those who wished to report more situations. Order of presentation of the "stressful" and "satisfying" sheets to nurses was randomized to prevent the possible introduction of bias. A third sheet of the questionnaire requested information regarding the nurse which the investigator thought might have an influence on her ability to identify the child's perceptions. These items included: (1) age, (2) motherhood status, (3) contact with children, (4) amount of pediatric nursing experience, (5) amount of total nursing experience, (6) type of education, (7) number of days spent with this child, (8) cultural differences between nurse and child, and (9) present job title.

Reliability

The reliability of the nurse questionnaire was not established for the same reasons as for the child interview schedule:

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[1]A copy of the Nurse Questionnaire is found in appendix I.

[2]This approach was used by Fox and Diamond, Satisfying and Stressful Situations in Basic Programs in Nursing Education, pp. 6-7, who found that preliminary trials of their instrument indicated that the words "satisfying" and "stressful" if unmodified, "were ambiguous for research purposes."

re-completion of the questionnaire was considered impractical and an unreasonable imposition on the nurse's time if a maximum response rate was to be achieved for the size of sample chosen and within the nurse's time constraints in the patient care setting.

Validity

The only evidence of validity was obtained by the amount of detail given in the responses. As in the child interview, the nurse was asked to indicate the details of the situation, and the day and time of day on which it occurred.

Hospital Information Form[1]

Many characteristics of hospital structure and organization have potential influence on the child's reactions, and on the nurse's relationship with the child in the process of providing care. The literature indicates that the types of visitors allowed, as well as the duration of visiting hours, potentially influence the child's adjustment.[2] Georgopoulos and Mann, in their study of ten community general hospitals, found that the ratio of professional nurses to patients was positively correlated with "quality of nursing care".[3] This investigator expected the nurse-patient ratio, and also the type of nursing organization, to be potential factors in the nurse's ability to identify patient perceptions, as they would influence the amount of time the nurse would have to spend

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[1]Refer to appendix I.

[2]Refer to the studies cited in chapter I. p. 4.

[3]Georgopoulos, Basil S. and Floyd C. Mann, The Community General Hospital (New York: The Macmillan Company, 1962), p. 606.

with a child. In addition, the investigator expected that there might be differences between general-acute and children's hospital nurses' abilities to identify children's perceptions, and indeed between the perceptions of children in the two types of hospitals. The following five factors, then, were chosen for investigation: (1) type of hospital, i.e., general or pediatric, (2) visiting policies, (3) type of nursing organization, i.e., team or functional nursing, (4) types and numbers of nursing staff on the unit, and (5) number of patients on the unit.

Data Collection Procedure

Data were collected from Tuesday through Friday for five consecutive weeks. All interviews were conducted in the afternoons between 12:30 and 4:00 p.m. One hospital was pre-selected each day, so that the total number of patients sampled in each hospital would conform to the sampling plan set out in table 1.[1] Interviews in the five general hospitals were arranged so that no hospital was visited on two consecutive days. In the two pediatric hospitals, interviews were collected on consecutive days; one of these hospitals was in another city, necessitating this procedure. With the exception of this latter hospital, staff were not informed of the specific days that the investigator would be present to minimize the likelihood of their being more alert to the child's perceptions than they would ordinarily be.

The investigator arrived at the hospital shortly after lunch, and prepared a list of all eligible patients in each stratum

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[1] See page 48.

according to the conditions specified earlier. Patients within each stratum were then randomly selected for interview.

Prior to beginning the interviews, the investigator located the nurse assigned to each selected child, and personally handed her the nurse questionnaire, requesting her to complete it before the end of her shift. The children were then interviewed; all interviews were recorded on cassette tape. Following completion of the interviews, the supplementary information was obtained from the charts, and the nurse questionnaires were collected. All personnel and patients were identified only by anonymous code numbers, which were used only as identifiers for computer analysis.

Analysis of the Data

The analysis of the data is described as follows: content analysis procedures; analysis of child interview; analysis of nurse questionnaire; comparison of child interview and nurse questionnaire.

Content Analysis Procedures

Typed transcripts were made of all the tape-recorded interviews. An analysis outline was developed after careful study of the content of the child interviews and nurse questionnaires. In this way the analysis was adapted to the child's frame of reference. Cartwright cites the possibility of this adaptation as an advantage of the open-ended question over the fixed-alternative question. In the latter question, the answer may be inaccurately categorized because none of the alternatives fit the respondent's frame of

reference.[1]

The analysis outline was constructed to measure three aspects of the responses: (1) the input--who or what was the stimulus that caused the child to perceive stress or satisfaction, (2) the process--what actually happened, and (3) the outcome--how did the child feel? This outline was defined precisely to ensure as much objectivity as possible.[2] The recording unit was taken to be the answer to a single question, although at times the meaning of the unit was clear only in light of the "context unit", a block of related questions.[3]

The content of all interviews and questionnaires was then classified by the investigator, using the tapes and the transcripts simultaneously.

A second coder was instructed in the classification procedure, and independently classified the content of all interviews and questionnaires. This person was also a registered nurse. Some nursing-medical background was thought to be necessary to adequately interpret some of the dialogue on the taped interview.

It was also considered important that the second coder be as different as possible from the investigator, to minimize the possibility that coder agreement might be due merely to a similar

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[1]D. P. Cartwright, "Analysis of Qualitative Material," in Research Methods in the Behavioral Sciences, eds. L. Festinger and D. Katz (New York: Holt, Rinehart, and Winston, Inc., 1953), p. 439.

[2]The content analysis categories, as well as the coding instructions, are found in appendix II.

[3]Cartwright, "Analysis of Qualitative Materials," p. 437.

bias between the coders. The less similarity between coders, the more the estimate of coder reliability borders on an estimate of validity: the second coder becomes a second method of rating.[1] The investigator had several years of pediatric nursing experience, and formal graduate level training in research, while the second coder had a hospital nursing school RN diploma, and less than one year's experience in geriatric medical-surgical nursing. These differences in education and experience were considered sufficient to allow treatment of the reliability ratings as a quasi-validity estimate.

The consistency of the ratings between the two coders was recorded in terms of percent agreement for each of the three parts of the responses.[2] A minimum of 80 percent agreement was considered acceptable.

Analysis of Child Interview and Nurse Questionnaire

Children and nurses were classified by the demographic, illness-related, and organizational variables presented earlier in this chapter. The total number and percentage of situations reported were analyzed by each of the above classifications. The proportions of stress and satisfaction reported by children and identified by

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[1]See Donald T. Campbell and Donald W. Fiske, "Convergent and Discriminant Validation by the Multitrait - Multimethod Matrix," Principles of Educational and Psychological Measurement, ed. W. A. Mehrens and R. L. Ebel (Chicago: Rand McNally and Co., 1967), pp. 273-302, for a detailed description of the reasons for estimating validity by several methods.

[2]T. O. Maguire and C. B. Hazlett, "Reliability for the Researcher," Alberta Journal of Educational Research 15:2 (1969): 125. These authors state that percent agreement is the appropriate measure of reliability for non-interval data.

nurses were similarly classified by the same variables.

Responses were then grouped into a number of content categories, which are detailed in appendix II. The proportion of stress and satisfaction reported in each content category was classified according to the above-mentioned demographic, illness-related, and organizational variables.

A measure of relating the number of stressful and satisfying situations reported by children was devised, adopting the methods used by Dollard and Mowrer, and White.[1] This measure was designated as the Stress-Satisfaction Quotient, and was determined as follows:

$$\frac{\text{Number of stressful situations}}{\text{Number of stressful and satisfying situations}}$$

Comparison of Child Interview and Nurse Questionnaire

The proportion and categories of agreement between nurses and children were classified by the demographic and organizational variables related to nurses, and also by the demographic and illness-related characteristics of the children.

We shall now turn to the presentation and analysis of the findings.

[1] J. Dollard and O. H. Mowrer, "A Method of Measuring Tension in Written Documents," Journal of Abnormal and Social Psychology 42 (1947): 3-32. The authors use a "discomfort-relief quotient" made up of $\frac{\text{discomfort words}}{\text{discomfort and relief words}}$. R. K. White, "Black Boy: A Value Analysis," Journal of Abnormal and Social Psychology 42 (1947): 440-61, uses a similar "frustration-satisfaction ratio".

CHAPTER IV

PRESENTATION AND ANALYSIS OF CHILDREN'S AND NURSES' RESPONSES

Introduction

In this chapter the reliability and validity measures are described, followed by separate analyses of the responses of children and nurses. In chapter V the analysis of agreement between children and nurses is presented. The primary guide for including tables in the text was that of illustrating greater than five percent differences between groups. The remaining tables appear in appendix III. It is recognized, however, that numerically smaller differences inherently are no less "meaningful" than larger differences, as similarities can be equally important.

In the narrative, percentage differences between groups have been emphasized, rather than the actual totals, which are presented in the tables. In the interest of detail, percentages have been reported to the nearest decimal point. For practical purposes, however, rounding to the nearest whole number would be sufficiently precise.

Measures of Reliability and Validity

Reliability of Child Respondents

Four questions asked of the children were checked against information from the hospital charts; 95.7 percent of the children's responses were in agreement with the chart regarding their age. Ten charts did not contain information regarding previous hospitalization,

and twenty-five were missing information on birthrank, or number of siblings. Where the above information was available, 91.7 percent of children's responses were in agreement with the chart data regarding previous hospitalization, and 95.6 percent on the number of siblings and birthrank. Overall, there was 85.7 percent agreement with all of the items available on the chart. Ten children (14.3 percent) disagreed with one item, and one child disagreed with three items. With the exception of the latter child, the information reported by the children appeared at face value to be reliable.

Consistency of Interview Technique

Very little difference (3.7 percent) was found in the proportions of stress and satisfaction reported by children interviewed in the first and last thirds of the study. One factor which may have caused such a difference was the investigator's interview technique. The findings thus lend support to the hypothesis that the interview technique did not change over time so as to influence the children's responses, although other unidentified factors could have been operating to produce a net effect of no change. (See table 90, appendix III.)

Agreement Between Coders

The percentage of agreement between the two coders in reference to the "input" category of responses was 88.3 percent. There was 90.8 percent agreement on the children's responses, and 83.3 percent agreement on the nurses' responses. For the "process" category of responses, agreement was 86.4 percent. There was 89.4 percent agreement on the childrens' responses, and 80.2 percent on the nurses' responses. Finally, in the "outcome" category, agreement was at the 99.3 percent level. Agreement for childrens' responses was 99.3

percent, for nurses' responses, 99.1 percent.

The level of agreement in all cases was above the 80 percent set as a minimum acceptable level. A reasonable degree of reliability between the two coders was therefore established. Prior to analysis, the coders discussed responses on which they disagreed and recategorized them into mutually acceptable categories.

Analysis of Children's Responses

A total of 445 situations were reported by the 70 children interviewed. Of these situations, 148 were perceived by the children as stressful, 288 were perceived as satisfying, and 9 were classified as ambivalent. The ambivalent situations are omitted from this section of the analysis, because the focus of the study was on stress and satisfaction only, leaving a total of 436 stressful and satisfying situations. The range of stressful situations reported was 0 to 10 per child, with a majority of children reporting 1 or 2 stressful situations. The range of satisfying situations was 0 to 13 per child, with a majority reporting 3 satisfying situations.

By Stressful Situations

Table 4 summarizes the content of the stressful situations reported. Stressful situations related to people were reported most frequently, followed by situations related to the child's body, procedures related to the child's illness, situations related to places, situations related to activities, and miscellaneous situations. Highlights of the stressful situations, and verbatim examples of children's comments, are presented below.

Actual, threatened, or future absence of parents accounted for 9.5 percent of stressful situations. Typical comments were:

TABLE 4

STRESSFUL SITUATIONS REPORTED BY CHILDREN

"Input" - who or what caused the child to perceive stress	"Process" - what happened	Number of Stressful Situations		Percent of Stressful Situations	
		"Process"	"Input"	"Process"	"Input"
Other patients	Were unpleasant to child	8		5.3	
	Were unpleasant to someone else	5		3.4	
	Were absent/were going to be absent	5		3.4	
Total			18		12.1
Parents	Were absent/did not contact child	12		8.2	
	Will be/might be absent	2		1.3	
Total			14		9.5
Staff	Were unpleasant to child/did something child disapproved of	5		3.3	
	Were unpleasant to someone else	1		0.7	
	Were absent	1		0.7	
	Were with patient	1		0.7	
Total			8		5.4
Others	Were absent	6		4.1	
	Were unpleasant to someone else	2		1.3	
Total			8		5.4
Total People-Related Situations			48		32.4
Physical condition or apparatus	Was painful	8		5.3	
	Was experienced	3		2.0	
	Will be experienced	2		1.4	
	Was changed	1		0.7	
	Was threatening	1		0.7	
	Immobilized child	1		0.7	
	Was boring	1		0.7	
Total			17		11.5
Disturbance of Body function	Was experienced	9		6.1	
	Was painful	2		1.3	
Total			11		7.4
Personal Care	Was experienced	2		1.3	
	Was not wanted	1		0.7	
Total			3		2.0
Food/eating	Was unable to be experienced	3		2.0	
Total			3		2.0
Normal Body Function	Was painful	2		1.4	
Total			2		1.4
Total Situations Related to Body			36		24.3
Needles	Were experienced	5		3.4	
	Were threatening	1		0.6	
Total			6		4.0
Nursing Treatments	Were experienced	3		2.0	
	Were painful	1		0.7	
	Were not wanted	1		0.7	
Total			5		3.4
Surgery	Was threatening	2		1.3	
	Was experienced	1		0.7	
	Was painful	1		0.7	
Total			4		2.7
Medications	Were experienced	1		0.7	
	Were experienced by someone else	1		0.7	
Total			2		1.4
Tests and X-rays	Were experienced	2		1.4	
Total			2		1.4
Other Treatments	Were experienced	1		0.7	
	Were threatening	1		0.7	
Total			2		1.4
Total Procedures Related to Illness			21		14.3

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TABLE 4

STRESSFUL SITUATIONS REPORTED BY CHILDREN
(Continued)

"Input" - who or what caused the child to perceive stress	"Process" - what happened	Number of Stressful Situations		Percent of Stressful Situations	
		"Process"	"Input"	"Process"	"Input"
None	Child was not there	5		3.4	
	Child might not be able to go there	1		0.6	
School — Total		2	6	1.4	4.0
	Was not wanted	1		0.6	
	Was unpleasant	1		0.6	
	Was attended	2		1.4	
Hospital — Total		3	5	2.8	3.4
	Child was there	3		2.8	
	Someone else was there	1		0.7	
Total — Total		4			2.7
Total Situations Related to Places			15		10.1
Off-ward activity	Was not participated in	4		2.7	
	Was threatening	1		0.7	
Games/activities — Total		5	5		3.4
	Were not participated in	2		1.3	
	Were participated in	1		0.7	
T.V./movies — Total		3	3	2.0	2.0
No activity — Total	Was boring	3	3	2.0	2.0
Rest — Total	Was not wanted	1	1	0.7	0.7
Total — Total			1		0.7
Total Situations Related to Activities			15		10.1
Imaginary situation	Was experienced	3	3	2.0	2.0
Religious experience	Was experienced	2	2	1.4	1.4
Weather	Was watched	2	2	1.4	1.4
Miscellaneous things	Were done/ threatening/not done	6	6	4.0	4.0
Total Stressful Situations			148		100.0

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My dad didn't get a chance to come and see me.

It might be a bad day if my dad don't come.

My mom promised to come over but she forgot.

I couldn't phone my mom.

Four percent of stressful situations related to actions of staff, other than administration of treatments, which were perceived as unpleasant or undesirable by the child. For example:

My nurse said I was selfish. She took my punching ball away from me.

When my doctor came, he only stayed about thirty seconds.

Well, first off, the nurse never believed me I brushed my teeth, so I had to do 'em again. I don't like doing them.

The nurse said that I had to go in the [oxygen] tent for one more hour, and I had to stay in for longer, [it made me] mad.

The teacher came and got me, and I wanted to wait for the doctor.

Unpleasant actions of other patients were related to 8.7 percent of stressful situations. One little boy reported that "there were some boys that beat up on me." Another was upset because "this morning a girl wanted to leave. She was throwing stuff all over. The nurses had to hold the door shut." An eleven-year-old reported that the little boy in the next bed "was crying all day. He made me mad. I put the pillow on top of his face." A girl was upset that "those two girls [room-mates] were miserable to me."

Pain accounted for 9.4 percent of reported stress. Reports of pain ranged from relatively minor, such as, "my tummy felt ugly," and "it [walking cast] hurt when I stepped on it," to more severe, such as:

> When she [nurse] was scraping my leg off with the gauze, it hurted quite a bit. She has to go on that patch where the third degree burn is.

Situations related to body functions, such as general physical condition, immobilization, and inability to eat accounted for 24.3 percent of stress. One boy said, "I had to get my hair washed, and I didn't want it washed." Another was frightened because once in a while his traction apparatus "goes 'clink' and I thought my bone was going to pop out." Having to go without breakfast because of tests was a source of stress to several children. Several youngsters cited disorientation as frightening:

> I can't put everything right . . . I think I scattered most of it around. All I can remember after I fell off from the monkey bars is--nothing! I can't remember anybody being there; when I woke up I was in the hospital. I felt scared.
>
> . . . and then I got all mixed up in the night. Last night I got my operation, but I thought I got it the day before yesterday and I got all mixed up. Then the day went so quick that I forgot, and I didn't even know it was night time. I didn't feel that good, 'cause, like, sometimes, well, I feeled dizzy and I didn't really like it that much.

Procedures were responsible for 14.3 percent of stressful situations. Frequently mentioned were needles: "I got a blood test, and I hate them." One twelve-year-old reported he was mad because:

> They came to take my blood today--they took it this morning; they found out they didn't have enough and they had to come again. But the first time, this nurse that takes blood put the tube into the needle and let the vacuum out and it wasn't sucking any of my blood in. I got a great big black and blue mark.

Even the <u>possibility</u> of a needle was threatening to some children: "Some doctors came by with stuff and needles. I thought they were going to give me one."

A number of treatments perceived as unpleasant were described in vivid detail:

> I had to breathe in them two machines and I don't like doing that, but it's good for my health. Makes me cranky. 'Cause one, I slobber all over my mouth and the other one I sweat. I have to put a mask on and my face sweats.
>
> Those tubes [catheter] that they put in my thing. I didn't liked it too well. I had to go to the bathroom and they took the tube out.
>
> I was upset. The nurses come in and expect me to jump out of bed and start walking right after I had an operation.

Once again, the threat of a procedure to be endured in the future was stressful:

> There's a doctor in here and he said I had to have a bitopsy [sic] of my knee. That kind of got me worried.
>
> Just to think about being in a body cast for two months [makes me] unhappy.
>
> I felt sad when I found out that I was going to get this [cast] cut again. . . Finding out about it [was worse than] getting it done.

Four percent of stress was due to absence from home. A native child wistfully commented that she felt sad "just thinking of my home. It's far ways from here." Decisions by the doctor to keep a child in hospital for a few extra days were unwelcome. Fear of such a decision was also reported: "I was a little afraid when the doctor came because I thought he might say I couldn't go home."

Feelings about school accounted for 3.4 percent of stress. A number of children did not like attending school or doing lessons for a bedside teacher. One obviously mischievous nine-year-old reported that the teacher had kicked her out of school.

Inability to participate in activities was reported as the cause of 6 percent of stress. Several children reported being upset by an interruption in an activity they enjoyed:

> They were just about to start the films and the physical therapist came and got me and I had to miss the films.
>
> The doctors come to see me every once in a while. They disturb me when I'm doing something good--reading a comic or watching T.V.

Others felt bored and/or left out because their physical condition or treatment kept them from a desired activity. An eleven-year-old whose diagnosis was still in question was unhappy about not being able to go for "a long walk outside with the others." Another child on bedrest and in isolation with burns observed:

> A lousy day. It's been pretty boring. I can't go out. All the kids, you can hear them playing around out there. For a half hour I didn't see anybody.

By Satisfying Situations

The content of satisfying situations reported is summarized in table 5. Satisfying people-related situations were reported most frequently, followed by situations related to activities, situations related to the child's body, situations related to places, procedures related to the child's illness, and miscellaneous situations. Highlights of satisfying situations and examples of comments are presented below.

Parents accounted for 13.9 percent of satisfying situations. These included a visit from a parent, a gift from the parent, anticipated visits, and contact with parents by phone or mail. People other than parents and staff, such as visitors, other relatives, and volunteers, were reported as related to 15.6 percent of

TABLE 5

SATISFYING SITUATIONS REPORTED BY CHILDREN

"Input" - who or what caused the child to perceive satisfaction	"Process" - what happened	Number of Satisfying Situations		Percent of Satisfying Situations	
		"Process"	"Input"	"Process"	Input
Other people, excluding parents, staff, patients	Were present	22		7.6	
	Gave child a gift	16		5.6	
	Will be present in future	4		1.4	
	Contacted child	3		1.0	
Total			45		15.6
Parents	Were present	10		3.5	
	Gave child a gift	10		3.5	
	Contacted child	2		0.7	
	Will be present in future	2		0.7	
Total			40		13.9
Other patients	Were present	11		3.8	
	Gave child a gift	2		0.7	
	Were watched	1		0.4	
Total			14		4.9
Staff	Were present	7		2.4	
	Gave child something	1		0.4	
Total			8		2.8
Child himself	Was pleasant to someone else	1		0.4	
Total			1		0.3
Total People-Related Situations			108		37.5
Games/recreational activities	Were participated in	28		9.7	
	Will be participated in	1		0.4	
Total			29		10.1
T.V./Movies	Were watched	19		6.6	
Total			19		6.6
Crafts	Were participated in	15		5.2	
	Will be participated in	1		0.3	
Total			16		5.5
Off-ward activity	Was participated in	5		1.7	
	Will be participated in	1		0.4	
Total			6		2.1
Swimming/gym	Was participated in	3		1.0	
	Will be participated in	1		0.4	
Total			4		1.4
Rest	Was participated in	4		1.4	
Total			4		1.4
No activity	Was participated in	2		0.7	
Total			2		0.7
Total Situations Related to Activities			80		27.8
Food/eating	Was experienced	10		3.5	
	Will be experienced	2		0.7	
	Was not experienced	1		0.3	
Total			13		4.5
Physical condition or apparatus	Was changed or removed	5		1.7	
	Was going to be absent	2		0.7	
	Was experienced	2		0.7	
	Will be experienced	1		0.4	
	Was experienced by someone else	1		0.3	
Total			11		3.8
Normal body function	Was experienced	8		2.8	
Total			8		2.8
Personal care	Was experienced	4		1.4	
Total			4		1.4
Total Situations Related to Body			36		12.5

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TABLE 5

SATISFYING SITUATIONS REPORTED BY CHILDREN
(Continued)

"Input" - who or what caused the child to perceive satisfaction	"Process" - what happened	Number of Satisfying Situations		Percent of Satisfying Situations	
		"Process"	"Input"	"Process"	"Input"
School	Was attended	11		3.8	
	Was not attended	2		0.7	
	Was completed	1		0.4	
	Will not be attended in future	1		0.4	
Total			15		5.1
Home	Child will go there in future	13		4.5	
	Someone else went there	1		0.4	
Total			14		4.9
Playroom	Child was there	3		1.0	
Total			3		1.0
Hospital	Child was there	1		0.4	
Total			1		0.3
Total Situations Related to Places			33		11.5
Needles	Were removed	3		1.0	
	Were going to be removed	1		0.4	
	Were experienced	1		0.4	
Total			5		1.8
Other treatments (other than nursing)	Were done	4		1.4	
	Will be done	1		0.4	
Total			5		1.8
Surgery	Was done	2		0.7	
	Was completed	1		0.3	
Total			3		1.0
Nursing (Feedwards)	Were completed	1		0.3	
Total			1		0.3
Total Procedures Related to Illness			14		4.9
Weather	Was watched	2	2	2.4	2.4
Miscellaneous	Was experienced	2	2	2.4	2.4
Religious Experience	Was experienced	3	3	1.0	1.0
Total Satisfying Situations			288		100.0

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satisfaction.

Staff attention to or presence with the child accounted for only 2.8 percent of satisfaction. Satisfying situations related to staff almost always involved some personal attention being given by a nurse:

> The nurse brought me a birthday cake. I felt very pleased.
>
> [The nurse] was here. She said, "I'll show you what your bone looks like with blood inside it," and I felt that she liked me. That made me happy.
>
> I made this poster, and I put "Needles don't hurt," and put it up, and that made me feel good sort of.
>
> Anita [nurse] cheered me up 'cause I was crabby in the morning.
>
> The nurse brought me my pop. She's been nice to me.

Participation or anticipated participation in activities accounted for 27.8 percent of reported satisfaction. Games and similar recreational activities provided the largest part of this satisfaction, followed by television, crafts, and off-ward activities:

> It's been a good day because we're doing all sorts of crafts, and we made puppets, and we made animals out of play dough and we're going to paint them tomorrow. It's good, 'cause then you have something to do while you're in the hospital.
>
> The play lady brought me this stuff to do.
>
> I found out that Superman was on T.V.

Situations related to the body, such as eating, removal of an unpleasant physical condition, and experience of normal body function, were responsible for 12.5 percent of satisfaction.

> You get to have really good stuff to eat, like hamburgers, which I had for lunch.
>
> I was pleased I didn't have my traction on.

I can come out of my room now. It was boring, just being by myself.

I got to walk up and down steps [with two canes].

I could sit up by myself this morning.

Attendance at school accounted for 3.8 percent of satisfaction, while anticipation of going home was responsible for 4.5 percent.

Procedures related to the child's illness were reported as responsible for 4.9 percent of satisfaction. The majority of this satisfaction was due to relief at the completion of the procedure:

When it's all over with [debridement of burned area], it makes me feel good 'cause I know it's O.K. till the next day.

My I.V. fell out. It felt pretty good to get it out of my arm.

I felt good because yesterday and the day before that I had to go in the [oxygen] tent, and so far I didn't have to, because my temperature went down.

Having my operation--getting it over with.

A number of children expressed satisfaction related to the weather, which apparently affected different children in opposite ways. For instance: "This morning it was snowing. There was nothing else to do. I watched it . . . made me kind of happy," and, "It's nice and the sun's shining. It's not snowing."

By Strata

As was indicated above, the seventy children interviewed were divided into two equal strata, long-term and short-term length of stay. The modal length of stay for short-term children was two days; for long-term children, one to two months.

Short-term children reported a range of 0 to 10 stressful situations per child, with most children reporting 1, and 0 to 13

satisfying situations per child, with most reporting 3. Long-term children reported 0 to 5 stressful situations each, with most children reporting 3, and 0 to 10 satisfying situations per child, with most reporting 5.

A difference of less than one situation per child was found between total numbers of situations reported by children in each stratum. Similarly, there was less than one-half of one percent difference between the proportion of stressful and satisfying situations reported and the stratum. (See table 91, appendix III.)

Long-term patients reported nearly 6 percent of satisfaction related to their physical condition, while short-term patients reported only 1.5 percent, as shown in table 6. For example, a child hospitalized several months was pleased that "I'm not in my wheelchair anymore--I'm on crutches."

TABLE 6

PROPORTION OF SATISFYING SITUATIONS RELATED TO PHYSICAL CONDITION OR APPARATUS, BY STRATUM

	Stratum					
	Short-term		Long-term		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Related to Condition or Apparatus	2	1.5	9	5.9	11	3.8
Other Satisfying Situations	133	98.5	144	94.1	277	96.2
Total Satisfying Situations	135	100.0	153	100.0	288	100.0

However, long-term patients also reported 5.5 percent more stress related to bodily function than short-term patients. (See table 7.)

TABLE 7

PROPORTION OF STRESSFUL SITUATIONS RELATED TO THE BODY, BY STRATUM

	Stratum					
	Short-term		Long-term		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to the Body	15	21.4	21	26.9	36	24.3
Other Stressful Situations	55	78.6	57	73.1	112	75.7
Total Stressful Situations	70	100.0	78	100.0	148	100.0

Procedure-related stress was reported as responsible for 8.3 percent more stress by short-term patients. (See table 8.)

TABLE 8

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PROCEDURES, BY STRATUM

	Stratum					
	Short-term		Long-term		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Procedures	13	18.6	8	10.3	21	14.2
Other Stressful Situations	57	81.4	70	89.7	127	85.8
Total Stressful Situations	70	100.0	78	100.0	148	100.0

People were related to 11.7 percent more stress for short-term than for long-term patients. (See table 9.)

TABLE 9

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PEOPLE, BY STRATUM

	Stratum					
	Short-term		Long-term		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to People	27	38.6	21	26.9	48	32.4
Other Stressful Situations	43	61.4	57	73.1	100	67.6
Total Stressful Situations	70	100.0	78	100.0	148	100.0

By Age

The ages of respondents are shown in table 10.

TABLE 10

AGE OF CHILD RESPONDENTS

Age (years)	Number of Children	Percent
6	13	18.6
7	9	12.9
8	9	12.9
9	12	17.1
10	10	14.3
11	5	7.1
12	12	17.1
	70	100.0

The range of numbers of situations reported by children in each age group and the number of situations per child reported by the most children, are presented in table 11 below. Ten-year-olds reported the greatest number of stressful and satisfying situations per child.

TABLE 11

RANGE AND MOST FREQUENTLY REPORTED NUMBER OF SITUATIONS, BY AGE OF CHILD RESPONDENT

Age	Range of Number of Situations		Most Frequently Reported Number of Situations Per Child	
	Stressful	Satisfying	Stressful	Satisfying
6	0-5	1-7	0	3;4
7	0-5	0-9	2	3;5
8	0-8	1-13	2	1;3;5
9	0-4	1-11	0	1;3
10	0-10	0-11	4	6
11	0-3	3-4	3	3
12	0-5	0-6	1;3	4

Ten and twelve-year-olds reported the highest proportion of total situations as stressful (38.6 and 38.5 percent, respectively). The lowest proportion of stressful situations (26.7 percent) was reported by nine-year-olds. No general pattern related to age was apparent, as shown in table 12.

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TABLE 12

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY AGE OF CHILD

	6		7		8		9		10		11		12		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations	17	27.9	21	33.3	21	35.0	16	26.7	34	38.6	9	34.6	30	38.5	148	33.9
Satisfying Situations	44	72.1	42	66.7	39	65.0	44	73.3	54	61.4	17	65.4	48	61.5	288	66.1
Total Situations	61	100.0	63	100.0	60	100.0	60	100.0	88	100.0	26	100.0	78	100.0	436	100.0

Ten to twelve-year-olds obtained a greater proportion of their satisfaction from people than six to nine-year-olds; ten to twelve-year-olds also obtained more satisfaction from people such as visitors and volunteers, rather than from parents, staff, and other patients, than did six to nine-year-olds. Tables 13 and 14 below detail these relationships.

TABLE 13

PROPORTION OF SATISFYING SITUATIONS RELATED TO PEOPLE, BY CHILD'S AGE

	Age					
	6-9		10-12		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Related to People	53	31.4	55	46.2	108	37.5
Other Satisfying Situations	116	68.6	64	53.8	180	62.5
Total Satisfying Situations	169	100.0	119	100.0	288	100.0

TABLE 14

PROPORTION OF SATISFYING SITUATIONS RELATED TO "OTHER" PEOPLE, BY CHILD'S AGE

	Age					
	6-9		10-12		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Related to "Other" People	19	11.2	26	21.8	45	15.6
Other Satisfying Situations	150	88.8	93	78.2	243	84.4
Total Satisfying Situations	169	100.0	119	100.0	288	100.0

By Sex

Thirty-eight of the children interviewed were male, and thirty-two were female. Males reported a range of 0 to 10 stressful situations per child, with most children reporting 1 or 2, and 0 to 13 satisfying situations per child, with most reporting 3. Females reported 0 to 5 stressful situations each, with most reporting 2, and 0 to 11 satisfying situations per child, with most reporting 4. The proportion of total situations reported as stressful was 8 percent greater for males than for females, as indicated in table 15.

TABLE 15

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY SEX

	Male		Female		Total	
	No.	%	No.	%	No.	%
Stressful Situations	91	37.9	57	29.1	148	33.9
Satisfying Situations	149	62.1	139	70.9	288	66.1
Total Situations	240	100.0	196	100.0	436	100.0

Females reported 33 percent of satisfaction from activities, while males reported only 23 percent. (See table 16).

TABLE 16

PROPORTION OF SATISFYING SITUATIONS RELATED TO ACTIVITIES, BY SEX

	Male		Female		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Related to Activities	34	22.8	46	33.1	80	27.8
Other Satisfying Situations	115	77.2	93	66.9	208	72.2
Total Satisfying Situations	149	100.0	139	100.0	288	100.0

Females also reported 12.9 percent more stress due to the absence of parents or other people than males. (See table 17).

TABLE 17

PROPORTION OF STRESSFUL SITUATIONS RELATED TO ABSENCE, BY SEX

	Male		Female		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Absence	9	9.9	13	22.8	22	14.9
Other Stressful Situations	82	90.1	44	77.2	126	85.1
Total Stressful Situations	91	100.0	57	100.0	148	100.0

By Previous Hospitalization

Fifty-seven children (81.4 percent) had been hospitalized before, while for 13 (18.6 percent) this occasion was the first hospitalization. Of these 13, only 4 had never been separated from their parents overnight prior to admission. Children who had been previously hospitalized reported a range of 0 to 10 stressful situations per child, with most children reporting 2, and 0 to 10 satisfying situations per child, with most reporting 3. Children encountering their first hospital experience reported 0 to 8 stressful situations per child, with most reporting 1, and 0 to 13 satisfying situations each, with most reporting 3. Children with previous hospitalization reported a 5.3 percent greater proportion of stressful situations than children never before hospitalized, as shown in table 18.

TABLE 18

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY PREVIOUS HOSPITALIZATION

	Previous Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Stressful Situations	120	35.1	28	29.8	148	33.9
Satisfying Situations	222	64.9	66	70.2	288	66.1
Total Situations	342	100.0	94	100.0	436	100.0

The previously hospitalized children also reported 19.2 percent more body-related stress, and 10.1 percent more stress related to pain, than children not previously hospitalized. (See tables 19 and 20).

TABLE 19

PROPORTION OF STRESSFUL SITUATIONS RELATED TO BODILY ACTIVITY, BY PREVIOUS HOSPITALIZATION

	Previous Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Body	31	26.1	2	6.9	33	22.3
Other Stressful Situations	88	73.9	27	93.1	115	77.7
Total Stressful Situations	119	100.0	29	100.0	148	100.0

TABLE 20

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PAIN, BY PREVIOUS HOSPITALIZATION

	Previous Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Pain	12	10.1	0	0.0	12	8.1
Other Stressful Situations	107	89.9	29	100.0	136	91.9
Total Stressful Situations	119	100.0	29	100.0	148	100.0

In addition, the former group reported 7.5 percent more stress, and 12.3 percent less satisfaction related to parents, as shown in tables 21 and 22.

TABLE 21

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PARENTS, BY PREVIOUS HOSPITALIZATION

	Previous Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Parents	13	10.9	1	3.4	14	9.5
Other Stressful Situations	106	89.1	28	96.6	134	90.5
Total Stressful Situations	119	100.0	29	100.0	148	100.0

TABLE 22

PROPORTION OF SATISFYING SITUATIONS RELATED TO PARENTS, BY PREVIOUS HOSPITALIZATION

	Previous Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Related to Parents	40	18.0	20	30.3	60	20.8
Other Satisfying Situations	182	82.0	46	69.7	228	79.2
Total Satisfying Situations	222	100.0	66	100.0	288	100.0

By Address

Thirty-six children (51.4 percent) lived in the city in which the hospital was located, 29 (41.4 percent) lived elsewhere in Alberta, and 5 (7.2 percent) were from out-of-province. The range and most frequently reported number of stressful and satisfying situations are outlined in table 23.

TABLE 23

RANGE AND MOST FREQUENTLY REPORTED NUMBER OF STRESSFUL AND SATISFYING SITUATIONS, BY ADDRESS OF CHILD

	Range of Number of Situations		Most Frequently Reported Number of Situations Per Child	
	Stressful	Satisfying	Stressful	Satisfying
Local	0-4	0-13	0;1;2	3
Alberta	0-10	0-11	3	3;5
Out-of-province	0-5	2-6	5	6

Children whose home was in Alberta, but not in the city where they were hospitalized, reported a 5.1 percent greater proportion of total situations as stressful than local children; out-of-province children reported a 10.7 percent greater proportion of stressful situations than local children. (See table 24.)

TABLE 24

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY ADDRESS OF CHILD

	Address							
	Local		Alberta		Out-of-Province		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	65	30.8	66	35.9	17	41.5	148	33.9
Satisfying Situations	146	69.2	118	64.1	24	58.5	288	66.1
Total Situations	211	100.0	184	100.0	41	100.0	436	100.0

Satisfaction due to people and places was related to the child's address, with local children reporting 42.5 percent and out-of-province children only 12.5 percent of satisfaction related to people, and out-of-province children reporting 29.2 percent of satisfaction related to places, such as anticipation of going home, and attending school, while local children reported only 9.6 percent. (See tables 25 and 26.)

TABLE 25

PROPORTION OF SATISFYING SITUATIONS RELATED TO PEOPLE, BY ADDRESS OF CHILD

	Local		Alberta		Out-of province		Total	
	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Related to People	62	42.5	43	36.4	3	12.5	108	37.5
Other Satisfying Situations	84	57.5	75	63.6	21	87.5	180	62.5
Total Satisfying Situations	146	100.0	118	100.0	24	100.0	188	100.0

TABLE 26

PROPORTION OF SATISFYING SITUATIONS RELATED TO PLACES, BY ADDRESS OF CHILD

	Local		Alberta		Out-of-province		Total	
	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Related to Places	14	9.6	12	10.2	7	29.2	33	11.5
Other Satisfying Situations	132	90.4	106	89.8	17	70.8	255	88.5
Total Satisfying Situations	146	100.0	118	100.0	24	100.0	288	100.0

By Diagnosis

Twenty-nine children (41.4 percent) were admitted for medical treatment, 30 (42.9 percent) for surgery, and 11 (15.7 percent) for diagnostic reasons. Table 27 details the range and number of situations per child reported by most children, by diagnosis.

TABLE 27

RANGE AND MOST FREQUENTLY REPORTED NUMBER OF STRESSFUL AND SATISFYING SITUATIONS, BY DIAGNOSIS

	Range of Number of Situations		Most Frequently Reported Number of Situations Per Child	
	Stressful	Satisfying	Stressful	Satisfying
Medical	0-5	1-11	0;1;2	3
Surgical	0-10	0-10	2;3	5
Diagnostic	0-8	1-13	1	3

The proportion of stress and satisfaction reported among diagnostic categories varied by less than 4 percent.[1]

Stress related to bodily activity was significantly related to diagnosis, with surgical patients reporting 38 percent of stress related to bodily activity, as compared to 13.2 percent and 8.3 percent for medical and diagnostic patients respectively. (See table 28.) Comments from post-surgical patients, such as, "It hurt to sit up", or "I threw up", were frequent.

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[1]Refer to table 92, appendix III.

TABLE 28

PROPORTION OF STRESSFUL SITUATIONS RELATED TO BODILY ACTIVITY, BY DIAGNOSIS

	Medical		Surgical		Diagnostic		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations Related to Bodily Activity	7	13.2	27	38.0	2	8.3	36	24.3
Other Stressful Situations	46	86.8	44	62.0	22	91.7	112	75.7
Total Stressful Situations	53	100.0	71	100.0	24	100.0	148	100.0

By Admission Circumstances

Forty-six admissions (65.7 percent) were unplanned, of an acute or emergency nature, while 24 (34.3 percent) were elective. Children whose admissions were elective reported 0 to 10 stressful situations each, with most children reporting 2, and 0 to 8 satisfying situations, with most reporting 3 or 5 situations. Those who were admitted unexpectedly reported 0 to 8 stressful situations per child, with most reporting 1, and 0 to 13 satisfying situations, with most reporting 3.

Less than 3 percent difference was found between proportions of stressful and satisfying situations reported by children with elective and unplanned admissions.[1]

[1]Refer to table 93, appendix III.

By Hospital

As indicated in chapter III, children were interviewed in five general-acute hospitals and two children's hospitals. The range and most frequently reported number of responses for children in each hospital are detailed in table 29 below.

TABLE 29

RANGE AND MOST FREQUENTLY REPORTED NUMBER OF STRESSFUL AND SATISFYING SITUATIONS, BY HOSPITAL

		Range of Number of Situations		Most Frequently Reported Number of Situations Per Child	
		Stressful	Satisfying	Stressful	Satisfying
General-Acute	Hospital 1	0-8	1-13	0;1	3;5
	Hospital 2	0-5	2-8	2	5;6
	Hospital 3	0-5	0-4	1	1
	Hospital 4	0-3	2-11	0;2	3
	Hospital 5	2-10	3-7	3	3
Children's	Hospital 6	0-3	2-8	0;1;2;3	2;3;4;8
	Hospital 7	0-4	0-10	3	5

The total number of responses per child varied among hospitals from 3.6 to 15 as shown in table 30.

TABLE 30

TOTAL SITUATIONS REPORTED, BY HOSPITAL

		Total Number of Responses	Number of Children	Mean Number of Responses Per Child
General-Acute	Hospital 1	128	21	6.1
	Hospital 2	105	15	7.0
	Hospital 3	36	10	3.6
	Hospital 4	39	9	4.3
	Hospital 5	45	6	7.5
Children's	Hospital 6	23	5	4.6
	Hospital 7	60	4	15.0

There were also differences in the proportion of stressful and satisfying situations reported by children in different hospitals. Children in general-acute hospitals, taken as a group, reported 34.8 percent of total situations as stressful, while those in children's hospitals reported 30.1 percent as stressful. However, greater differences in proportions of stress and satisfaction were evident among general-acute hospitals only: the proportion of situations reported as stressful varied from 23.1 percent in hospital 4 to 48.9 percent in hospital 5, while in children's hospitals the range was only from 26.1 to 31.7 percent. (See table 31.)

Patients in the children's hospitals reported 38.1 percent more stress related to bodily activities than general-acute hospital patients. (See table 32.) Patients in general-acute hospitals reported 17.1 percent of stress related to illness-oriented procedures, while children's hospital patients reported no procedure-related stress. Table 33 details the above results.

TABLE 31
PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY HOSPITAL

	Hospital Type									Total
	General-Acute						Children's			
	1	2	3	4	5	Sub-Total	6	7	Sub-Total	
	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %	No. %
Stressful Situations	36 28.1	39 37.1	17 47.2	9 23.1	22 48.9	123 34.8	6 26.1	19 31.7	25 30.1	148 33.9
Satisfying Situations	92 71.9	66 62.9	19 52.8	30 76.9	23 51.1	230 65.2	17 73.9	41 68.3	58 69.9	288 66.1
Total Situations	128 100.0	105 100.0	36 100.0	38 100.0	45 100.0	353 100.0	23 100.0	60 100.0	83 100.0	436 100.0

TABLE 32

PROPORTION OF STRESSFUL SITUATIONS RELATED TO BODILY ACTIVITY, BY HOSPITAL TYPE

	General-acute		Children's		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Bodily Activities	22	17.9	14	56.0	36	24.3
Other Stressful Situations	101	82.1	11	44.0	112	75.7
Total Stressful Situations	123	100.0	25	100.0	148	100.0

TABLE 33

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PROCEDURES, BY HOSPITAL TYPE

	General-acute		Children's		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Procedures	21	17.1	0	0.0	21	14.2
Other Stressful Situations	102	82.9	25	100.0	127	85.8
Total Stressful Situations	123	100.0	25	100.0	148	100.0

By Other Variables

Children who were the sole occupants of a room reported 10.2 percent more of total situations as stressful than children who shared a room with one or more other patients. (See table 34.)

TABLE 34

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY SINGLE OR SHARED OCCUPANCY OF ROOM

	Single Occupancy		Shared Occupancy		Total	
	No.	%	No.	%	No.	%
Stressful Situations	35	42.2	113	32.0	148	33.9
Satisfying Situations	48	57.8	240	68.0	288	66.1
Total Situations	83	100.0	353	100.0	436	100.0

Children whose nurse on the interview day had cared for them only that day reported a 5.9 percent greater proportion of total situations as stressful than children whose nurse had cared for them two or more days. (See table 35.)

"Noise" during the interview had minimal relationship to the proportion of stressful and satisfying situations reported: there was less than 1 percent difference in proportions between "high" and "low" noise interviews. However, in "medium" noise interviews, the proportion of situations reported as stressful was 5.1 percent

higher than in "low" noise interviews. (See table 36.)

TABLE 35

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY LENGTH OF CARE GIVEN BY NURSE

	Length of Care							
	1 day		2-5 days		6+ days		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	80	36.7	36	30.8	28	30.8	144	33.8
Satisfying Situations	138	63.3	81	69.2	63	69.2	282	66.2
Total Situations	218	100.0	117	100.0	91	100.0	426[a]	100.0

[a]Ten situations were omitted because they were reported by children whose nurse did not indicate the length of time she had cared for the child.

TABLE 36

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY INTERVIEW "NOISE"

	Amount of Interview "Noise"							
	High		Medium		Low		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	22	32.8	48	37.5	78	32.4	148	33.9
Satisfying Situations	45	67.2	80	62.5	163	67.6	288	66.1
Total Situations	67	100.0	128	100.0	241	100.0	436	100.0

Stress-Satisfaction Quotient

The Stress-Satisfaction Quotient described in chapter III was computed for each child. The mean quotient for all children was 32.97. Of the 70 children, 74.3 percent (52 children) had a quotient of less than 50 percent, indicating less than one-half of the total situations reported were stressful. Eight children (11.4 percent) had a quotient of 50 percent, and for 10 children (14.3 percent) the quotient was greater than 50 percent, indicating more than one-half of the total situations reported were stressful. This quotient should be interpreted cautiously, as it deals only with the number of stressful and satisfying situations. The intensity of such situations cannot be assumed to be equivalent for all cases.

Discussion

Knowledge of stressors as perceived by hospitalized children is useful to the nurse in planning individualized care. The one largest source of stress and of satisfaction reported by children in this study was people. Within the broad category of "people", absence of parents was the single highest source of stress, while presence of parents scored second as a satisfaction. These findings are consistent with the first of Engel's main categories of stress: loss or threat of loss of a psychic object.[1]

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[1]Engel, "A Unified Concept of Health and Disease," p. 481.

Langford[1] suggests that stressors may be changed, firstly by personnel becoming aware of their existence, and secondly by changes being made in hospital policies and procedures. Flexible hospital policies which encourage parents to visit, and to stay as long as possible, should be considered to help combat the above source of stress, and conversely, to increase the potential for satisfaction.

The presence of people other than parents and staff, such as visitors and siblings, accounted for 15.6 percent of satisfaction. As mentioned earlier, 35.7 percent of the children's hospital charts did not contain information regarding the existence or number of siblings. This lack of information may be indicative of a failure to obtain individualized information about the children which could aid in identifying possible satisfiers or stressors.

Bodily function and illness-oriented procedures ranked second as stressors. Again, these findings are in agreement with Engel's second category of stress, injury or threatened injury.[2] The high proportion of stress attributed to bodily function is also consistent with Belmont's statement that school age children are threatened by loss of control.[3]

Dimock[4] suggests that children need opportunities to make decisions and have successful experiences. The high percentage of

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[1]Langford, "The Child in the Pediatric Hospital," p. 670.

[2]Engel, "A Unified Concept of Health and Disease," p. 482.

[3]Belmont, "Hospitalization and Its Effects Upon the Total Child," p. 476.

[4]Dimock, The Child in Hospital, p. 66.

satisfaction attributed by the children to activities in which they were involved would seem to bear out the above statement.

Greater proportions of stress related to bodily function were associated with surgical patients, long-term patients, and children's hospitals; long-term patients also reported greater satisfaction from bodily function. General hospital and short-term patients reported greater stress related to procedures. The association of stress with procedures and bodily function in surgical patients and in general hospitals is not surprising, as more procedures are performed in general hospitals, and particularly for surgical patients. The difference in proportion of stress and satisfaction among general hospitals suggests that some characteristic of the hospitals may be systematically related to perceptions of stress and satisfaction. Characteristics such as visiting policies and over-all staff-patient ratios were almost identical for all general hospitals, leaving some other unidentified characteristics to account for differences.

As most patients in the children's hospitals were also long-term, the combination of satisfaction from bodily activities and stress from bodily activities may be taken as an indication that the children who were hospitalized for long periods tended to focus on their bodies more than short-term, acute-care patients. In all likelihood long-term patients have more bodily abnormalities, and also have had more time to dwell on them than short-term patients. Menke's[1] finding that longer-hospitalized children reported more stress is supported here as well.

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[1]Menke, "Factors Related to Children's Perception of Stress in the Hospital," p. 118.

Children aged ten to twelve reported more satisfaction related to people, especially people other than parents and staff, than six to nine-year-olds. Females reported more satisfaction from activities than males, and more stress due to absence of people. The investigator did not locate similar findings regarding age and sex in the literature.

Local children reported higher proportions of satisfaction related to people, while out-of-province children, who presumably had fewer visitors, reported more satisfaction related to places. To the extent that local children had more visitors, these findings are consistent with Rose's conclusion that most of children's gratification in the hospital comes from sources outside the individual child. Children who are hospitalized far from home could likely benefit from extra personal attention, perhaps from volunteers.

Children who shared a room reported a smaller proportion of stress than children without roommates. Perhaps having other children with whom to interact helped to "absorb" some of the stress of hospitalization. This suggestion is supported by the fact that 10.1 percent of reported satisfaction was related to games and similar activities,[1] most of which were played with another child. Twenty-seven of the 29 satisfying games were reported by children who shared a room.

However, the potential benefits of a shared room may be offset in part by additional stress created by roommates. Children

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[1]Refer to table 5, p. 72.

interviewed in a "medium noise" environment reported higher proportions of stress than other children. The "noise" factor may have been related to a shared room: all but one (94.7 percent) of the "medium noise" interviews were conducted in a shared room, where other children's activities accounted for some distractions, while 20 percent of "low noise" interviews were in private rooms. The presence of other children in the room may have been related to the higher stress. Six of 13 stressful situations related to unpleasant actions of other patients[1] were reported by children in a shared room with "medium noise". Thus, one could argue that the roommates who presumably created the interview distractions also may have been unpleasant, thus creating stress.

Children whose nurses had cared for them only one day reported a greater proportion of situations as stressful than children whose nurses had cared for them more than one day. Such stress could possibly be related to the lack of time in which to establish child-nurse rapport. Although the total number of situations in which nurses were reported as causing satisfaction was very small (6 situations), 4 of these were reported by children whose nurse had cared for them more than one day. The above discussion is obviously not conclusive evidence for, but at least lends support in favor of assigning a nurse to the same child for several days.

Since the literature indicates that preparation for hospitalization tends to lessen a child's apprehension, one might

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[1]Refer to table 4, p. 66.

have expected a previous hospitalization experience to have similar effects: the child would know what to expect. However, the opposite was found in this study. Children previously hospitalized reported a higher proportion of stress. It is possible that the children with prior exposure to hospitalization had had negative experiences which "sensitized" them to expect, and therefore perceive, more of the same. This suggestion is supported by the finding that the two areas in which the greatest differences in stress were reported were body-related stress and pain. Such an interpretation is also consistent with the literature, which indicates that the child's reaction to previous illness influences his subsequent reactions.[1]

The reader is cautioned that the relationships suggested in the above discussion are tenuous: most are based on differences of less than ten percent. The relationships reported were observed in this study population, but formal hypotheses would have to be developed and tested to support the reasons suggested.

Analysis of Nurses' Responses

The 70 nurses who completed questionnaires identified a total of 226 situations experienced by children. The nurses reported that they thought the child perceived stress in 113 situations, and satisfaction in 108 situations. Ambivalence on the child's part was reported in 5 situations. As in the previous section, the ambivalent

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[1]Langford, "The Child in The Pediatric Hospital." pp. 669-70.

situations are omitted from this section of the analysis, leaving a total of 221 stressful and satisfying situations identified.

By Stressful Situations

Table 37 summarizes the content of the stressful situations identified by nurses. Stress related to the body was identified most frequently, followed by stress related to people, procedures, places, activities, and miscellaneous situations, respectively.

Disturbance of bodily function was identified as responsible for 13.2 percent of stressful situations, while the presence of a physical condition or apparatus was related to 11.5 percent of identified stress. Pain accounted for 10.7 percent and procedures were responsible for 20.4 percent of identified stress.

Parental absence accounted for 8.8 percent of stress, while staff actions accounted for 4.5 percent. Nurses did not identify absence from home as responsible for any stress, although the hospitalization experience was reported as 4.4 percent of stress identified.

By Satisfying Situations

The content of satisfying situations identified by nurses is summarized in table 38. Satisfying situations related to people were identified most frequently, followed by situations related to activities, the body, places, procedures, and miscellaneous situations.

Staff were identified by nurses as related to 11.1 percent of satisfaction, while parents followed closely with 10.2 percent. Activities such as games, crafts, and television accounted for 26.9

TABLE 37

STRESSFUL SITUATIONS IDENTIFIED BY NURSES

"Input" - Who or What Caused the Child to Perceive Stress	"Process" - What Happened	Number of Stressful Situations		Percent of Stressful Situations	
		"Process"	"Input"	"Process"	"Input"
Disturbance of Body Function	Was experienced	11		9.7	
	Was painful	4		3.5	
Total			15		13.2
Physical Condition or Apparatus	Immobilized child	4		3.5	
	Was experienced	2		1.8	
	Was threatening	2		1.8	
	Was painful	2		1.8	
	Was changed	1		0.9	
	Will be experienced	1		0.9	
	Was not wanted	1		0.8	
Total			13		11.5
Personal Care	Was painful	3		2.7	
	Was not wanted	2		1.8	
	Was threatening	1		0.9	
	Was experienced	1		0.8	
Total			7		6.2
Food/Eating	Was unable to be experienced	1		0.9	
	Was not wanted	1		0.9	
	Was experienced	1		0.9	
Total			3		2.7
Normal Body Function	Was painful	1		0.9	
	Was threatening	1		0.9	
Total			2		1.8
Total Situations Related to Body			40		35.4
Parents	Were absent	10		8.8	
	Were unpleasant to child	1		0.9	
Total			11		9.7
Other Patients	Were unpleasant to child	4		3.5	
	Were unpleasant to someone else	3		2.7	
	Were absent	2		1.8	
	Were threatening	1		0.8	
Total			10		8.8
Staff	Were unpleasant to child	2		1.8	
	Were unpleasant to someone else	1		0.9	
	Were absent	1		0.9	
	Will be absent	1		0.9	
Total			5		4.5
Other People	Were absent	1		0.9	
	Were threatening	1		0.9	
Total			2		1.8
Total Situations Related to People			28		24.8

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TABLE 37

STRESSFUL SITUATIONS IDENTIFIED BY NURSES
(Continued)

"Input" - Who or What Caused the Child to Perceive Stress	"Process" - What Happened	Number of Stressful Situations		Percent of Stressful Situations	
		"Process"	"Input"	"Process"	"Input"
Needles	Were experienced	5		4.4	
	Immobilized child	1		0.9	
Total			6		5.3
Nursing Treatments	Were experienced	3		2.7	
	Were painful	2		1.8	
	Were not wanted	1		0.8	
Total			6		5.3
Surgery	Was threatening	2		1.8	
	Will be experienced	2		1.8	
	Was experienced	1		0.9	
	Was not experienced	1		0.8	
Total			6		5.3
Other Treatments	Were experienced	2		1.8	
	Were not wanted	1		0.9	
Total			3		2.7
Medications	Were experienced	1		0.9	
Total			1		0.9
Tests and X-rays	Were experienced	1		0.9	
Total			1		0.9
Total Procedures Related to Illness			23		20.4
Hospital	Child was there	3		2.7	
	Someone else was there	1		0.9	
	Was threatening	1		0.8	
Total			5		4.4
School	Was attended	1		0.9	
	Was unpleasant	1		0.9	
	Was not attended	1		0.9	
Total			3		2.7
Home	Someone else was there	1		0.9	
Total			1		0.9
Playroom	Was not participated in	1		0.8	
Total			1		0.8
Total Situations Related to Places			10		8.8
Off-ward Activity	Might not be participated in	3		2.7	
	Was boring	1		0.9	
Total			4		3.5
Games/Activities	Were participated in	1		0.9	
	Were not participated in	1		0.9	
	Were not wanted	1		0.9	
Total			3		2.7
No Activity	Was boring	2		1.8	
Total			2		1.8
Rest	Was experienced	1		0.8	
Total			1		0.8
Total Situations Related to Activities			10		8.8
Miscellaneous Things	Were experienced	2		1.8	
Total			2		1.8
Total Miscellaneous Situations			2		1.8
Total Stressful Situations			113		100.0

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TABLE 38

SATISFYING SITUATIONS IDENTIFIED BY NURSES

"Input" - Who or What Caused the Child to Perceive Satisfaction	"Process" - What Happened	Number of Satisfying Situations		Percent of Satisfying Situations	
		"Process"	"Input"	"Process"	"Input"
Staff	Were present	12		11.1	
Total			12		11.1
Parents	Were present	9		8.3	
	Gave child a gift	2		1.9	
Total			11		10.2
Other People (excluding parents, staff, patients)	Gave child a gift	4		3.7	
	Were present	3		2.8	
	Contact child	2		1.9	
	Will be present in future	1		0.9	
Total			10		9.3
Other Patients	Were present	4		3.7	
Total			4		3.7
Child Himself	Was pleasant to someone else	1		0.9	
Total			1		0.9
Total Situations Related to People			38		35.2
Games/Activities	Were participated in	19		17.6	
Total			19		17.6
Crafts	Were participated in	4		3.7	
Total			4		3.7
T.V./Movies	Were watched	3		2.8	
Total			3		2.8
Off-ward Activity	Were participated in	3		2.8	
Total			3		2.8
No Activity	Was participated in	1		0.9	
Total			1		0.9
Total Situations Related to Activities			30		27.8
Normal Body Function	Was experienced	6		5.6	
Total			6		5.6
Personal Care	Was experienced or participated in	4		3.7	
	Will be experienced	1		0.9	
Total			5		4.6
Physical Condition or Apparatus	Was removed	4		3.7	
Total			4		3.7
Food/Eating	Was experienced	2		1.9	
	Was changed	1		0.9	
Total			2		2.8
Total Situations Related to Body			18		16.7

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TABLE 38

SATISFYING SITUATIONS IDENTIFIED BY NURSES
(Continued)

"Input" - Who or What Caused the Child to Perceive Satisfaction	"Process" - What Happened	Number of Satisfying Situations		Percent of Satisfying Situations	
		"Process"	"Input"	"Process"	"Input"
none	Child will be there in future	5		4.6	
	Child was there	1		0.9	
Total			6		5.5
School	Was attended	4		3.7	
Total			4		3.7
Playroom	Was participated in	2		1.9	
Total			2		1.9
Total Situations Related to Places			12		11.1
Nursing Treatments	Were completed	4		3.7	
Total			4		3.7
Needles	Were removed	2		1.9	
	Were experienced	1		0.9	
Total			3		2.8
Medication	Was experienced	1		0.9	
Total			1		0.9
Other Treatments (other than nursing)	Were participated in	1		0.9	
Total			1		0.9
Total Situations Related to Procedures			9		8.3
Miscellaneous Things	Were experienced	1		0.9	
Total			1		0.9
Total Miscellaneous Situations			1		0.9
Total Satisfying Situations			108		100.0

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percent of identified satisfaction. Anticipation of home was related to 5.5 percent of satisfaction, while school attendance accounted for 3.7 percent.

Procedures were related to 8.3 percent of satisfaction identified. The majority of this satisfaction was due to relief at the completion of the procedure.

By Age

The largest group of nurses (42.9 percent) were between 21 and 25 years of age, followed by 17.1 percent of nurses aged 26 to 30, and also 31 to 40. Those over 40 made up 14.3 percent with 8.6 percent 20 years of age or less. Nurses 20 or under identified the smallest proportion (37.5 percent) of total situations as stressful, and those over 40 the largest proportion (57.6 percent), as shown in table 39.

TABLE 39

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY AGE OF NURSE

	Age of Nurse											
	20 or less		21-25		26-30		31-40		41+		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations	6	37.5	57	53.3	18	48.6	13	46.4	19	57.6	113	51.1
Satisfying Situations	10	62.5	50	46.7	19	51.4	15	53.6	14	42.4	108	48.9
Total Situations	16	100.0	107	100.0	37	100.0	28	100.0	33	100.0	221	100.0

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Nurses thirty years of age and over identified a 16.1 percent greater proportion of satisfying situations related to the child's body than nurses under thirty. (See table 40.)

TABLE 40

PROPORTION OF SATISFYING SITUATIONS RELATED TO THE BODY, BY AGE OF NURSE

	Age of Nurse					
	< 30 years		30+ years		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Related to Body	10	12.5	8	28.6	18	16.7
Other Satisfying Situations	70	87.5	20	71.4	90	83.3
Total Satisfying Situations	80	100.0	28	100.0	108	100.0

By Personal Childhood Hospitalization Experience

Fifty-two percent of nurses were personally hospitalized as children and forty-eight percent were not. The former group of nurses identified 9.1 percent more of total situations as stressful than the latter group. (See table 41.)

Nurses with no childhood hospitalization experience identified a 17.7 percent greater proportion of stressful situations related to the body, and a 17.2 percent greater proportion of satisfying situations related to recreational activities, than did nurses hospitalized in childhood. (See tables 42 and 43.)

TABLE 41

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY CHILDHOOD HOSPITALIZATION EXPERIENCE OF NURSE

	Childhood Hospitalization Experience of Nurse					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Stressful Situations	62	55.9	51	46.4	113	51.1
Satisfying Situations	49	44.1	59	53.6	108	48.9
Total Situations	111	100.0	110	100.0	221	100.0

TABLE 42

PROPORTION OF STRESSFUL SITUATIONS RELATED TO THE BODY, BY CHILDHOOD HOSPITALIZATION EXPERIENCE OF NURSE

	Nurse Hospitalized as a Child		Nurse Not Hospitalized As a Child		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to the Body	17	27.4	23	45.1	40	35.4
Other Stressful Situations	45	72.6	28	54.9	73	64.6
Total Stressful Situations	62	100.0	51	100.0	113	100.0

TABLE 43

PROPORTION OF SATISFYING SITUATIONS RELATED TO RECREATIONAL ACTIVITIES, BY CHILDHOOD HOSPITALIZATION EXPERIENCE OF NURSE

	Nurse Hospitalized as Child		Nurse Not Hospitalized as Child		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Related to Recreational Activities	9	18.4	21	35.6	30	27.8
Other Satisfying Situations	40	81.6	38	64.4	78	72.2
Total Satisfying Situations	49	100.0	59	100.0	108	100.0

By Motherhood Status

Sixteen of the nurses (22.9 percent) were mothers, 53 (75.7 percent) were not, and 1 nurse did not specify her motherhood status. Mothers identified 8.3 percent more of total situations as stressful than non-mothers. (See table 44.) Mothers identified a 23.1 percent greater proportion of stress related to people than non-mothers. (Refer to table 45.)

TABLE 44

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY MOTHERHOOD STATUS OF NURSE

	Motherhood Status of Nurse							
	Mother		Non-Mother		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	28	57.1	81	48.8	4	66.7	113	51.1
Satisfying Situations	21	42.9	85	51.2	2	33.3	108	48.9
Total Situations	49	100.0	166	100.0	6	100.0	221	100.0

TABLE 45

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PEOPLE, BY MOTHERHOOD STATUS OF NURSE

	Mother		Non-Mother		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to People	12	42.9	16	19.8	28	25.7
Other Stressful Situations	16	57.1	65	80.2	81	74.3
Total Stressful Situations	28	100.0	81	100.0	109[a]	100.0

By Contact with Children

The responses of the 53 nurses who were not mothers were analyzed in terms of whether or not they had any regular contact with children such as siblings, other than in the hospital. Nurses who had such regular contact identified a 35.8 percent greater proportion of stressful situations than satisfying ones. They also identified 16.6 percent more satisfying situations related to the body. (See tables 46 and 47.)

TABLE 46

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY NURSES' CONTACT WITH CHILDREN

	Contact with Children		No Contact with Children		Total[a]	
	No.	%	No.	%	No.	%
Stressful Situations	74	57.4	8	21.6	82	49.4
Satisfying Situations	55	42.6	29	78.4	84	50.6
Total Situations	129	100.0	37	100.0	166	100.0

[a]Nurses who were mothers are not included in this analysis.

TABLE 47

PROPORTION OF SATISFYING SITUATIONS RELATED TO THE BODY, BY NURSES' CONTACT WITH CHILDREN

	Contact with Children		No Contact with Children		Total[a]	
	No.	%	No.	%	No.	%
Satisfying Situations Related to the Body	11	20.0	1	3.4	12	14.3
Other Satisfying Situations	44	80.0	28	96.6	72	85.7
Total Satisfying Situations	55	100.0	29	100.0	84	100.0

[a]Nurses who were mothers are not included in this analysis.

By Education

The largest group of nurse respondents (34.3 percent) were certified nursing aides (CNA's). Twenty-four and one-third percent were registered nurses (RN's) from a three-year program, 21.4 percent were student nurses (SN's), and 8.6 percent were two-year registered nurses. Staff with less qualifications than certified nursing aides (CNA's), and baccalaureate nurses (BSN's) each accounted for 5.7 percent of respondents.

The proportion of stressful and satisfying situations identified differed according to the nurse's education, as shown in table 48.

Certified nursing aides identified the largest proportion of stress (58.4 percent), followed by BSN degree nurses (57.1 percent). Staff with less education than CNA's identified no stress, while 2-year RN's identified the next-lowest proportion, 43.5 percent.

TABLE 48

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED BY EDUCATION OF NURSE

	Education of Nurse													
	<CNA		CNA		SN		RN (3 yr.)		RN (2 yr.)		BSN		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations	0	0.0	45	58.4	25	55.6	29	47.5	10	43.5	4	57.1	113	51.1
Satisfying Situations	8	100.0	32	41.6	20	44.4	32	52.5	13	56.5	3	42.9	108	48.9
Total Situations	8	100.0	77	100.0	45	100.0	61	100.0	23	100.0	7	100.0	221	100.0

By Pediatric Experience

Thirty of the nurses (42.9 percent) responding had less than one year of pediatric experience, 19 (27.1 percent) had between one and three years, and 21 (30.0 percent) had four or more years of pediatric experience. The proportion of stressful situations identified by nurses increased with the length of pediatric nursing experience, as shown in table 49.

Nurses with four or more years of pediatric experience identified only 5.9 percent of stress related to procecures, while nurses with one to three years experience in pediatrics identified 33.3 percent. (See table 50.)

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TABLE 49

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY LENGTH OF PEDIATRIC EXPERIENCE OF NURSE

	Length of Pediatric Experience							
	Less than 1 year		1-3 years		4 or more years		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	46	45.1	33	54.1	34	58.6	113	51.1
Satisfying Situations	56	54.9	28	45.9	24	41.4	108	48.9
Total Situations	102	100.0	61	100.0	58	100.0	221	100.0

TABLE 50

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PROCEDURES, BY LENGTH OF PEDIATRIC EXPERIENCE OF NURSE

	Length of Pediatric Experience							
	Less than 1 year		1-3 years		4 or more years		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations Related to Procedures	10	21.7	11	33.3	2	5.9	23	20.4
Other Stressful Situations	36	78.3	22	66.7	32	94.1	90	79.6
Total Stressful Situations	46	100.0	33	100.0	34	100.0	113	100.0

By Total Experience

Twenty-nine nurses (41.4 percent) had one to five years total nursing experience, 26 (37.2 percent) had six or more years of experience, and 15 (21.4 percent) had nursed for less than one year. Once again, the proportion of stressful situations identified increased with length of total nursing experience. (See table 51.)

Nurses with less than one year of experience identified 52.4 percent of stress as related to procedures, while nurses with 6 or more years of experience identified only 9.3 percent. (See table 52.)

TABLE 51

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY LENGTH OF TOTAL EXPERIENCE OF NURSE

	Length of Total Experience							
	Less than 1 year		1-5 years		6 or more years		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	21	43.8	49	50.5	43	56.6	113	51.1
Satisfying Situations	27	56.2	48	49.5	33	43.4	108	48.9
Total Situations	48	100.0	97	100.0	76	100.0	221	100.0

TABLE 52

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PROCEDURES, BY LENGTH OF TOTAL EXPERIENCE OF NURSE

	Length of Total Experience							
	Less than 1 year		1-5 years		6 or more years		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations Related to Procedures	11	52.4	8	16.3	4	9.3	23	20.4
Other Stressful Situations	10	47.6	41	83.7	39	90.7	90	79.6
Total Stressful Situations	21	100.0	49	100.0	43	100.0	113	100.0

By Length of Time Nurse Cared for Child

Thirty-eight nurses (54.3 percent) had cared for the child selected for only one day. Sixteen (22.9 percent) had cared for the child from two to five days, while 13 (18.6 percent) had cared for him more than six days. Three nurses did not indicate the length of time they had cared for the child. Nurses who had cared for the child six or more days identified 10.8 percent more of total situations as stressful than nurses who had cared for the child only one day. (See Table 53.)

TABLE 53

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY LENGTH OF TIME NURSE CARED FOR CHILD

	Length of Care									
	1 day		2-5 days		6 or more days		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations	52	48.1	24	46.2	33	58.9	4	80.0	113	51.1
Satisfying Situations	56	51.9	28	53.8	23	41.1	1	20.0	108	48.9
Total Situations	108	100.0	52	100.0	56	100.0	5	100.0	221	100.0

Nurses who had cared for children six or more days identified only 3.0 percent of stress related to procedures, and 54.5 percent related to the body, while those caring for the child two to five days identified 37.5 percent related to procedures and 25.0 percent related to the body. (See tables 54 and 55.)

TABLE 54

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PROCEDURES, BY LENGTH OF TIME NURSE CARED FOR CHILD

	Length of Care									
	1 day		2-5 days		6 or more days		Not Specified		Total Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations Related to Procedures	12	23.1	9	37.5	1	3.0	1	25.0	22	20.2
Other Stressful Situations	40	76.9	15	62.5	32	97.0	3	75.0	87	79.8
Total Stressful Situations	52	100.0	24	100.0	33	100.0	4	100.0	109	100.0

TABLE 55

PROPORTION OF STRESSFUL SITUATIONS RELATED TO THE BODY, BY LENGTH OF TIME NURSE CARED FOR CHILD

	Length of Care									
	1 day		2-5 days		6 or more days		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations Related to the Body	16	30.8	6	25.0	18	54.5	0	0.0	40	36.7
Other Stressful Situations	36	69.2	18	75.0	15	45.5	4	100.0	69	63.3
Other Stressful Situations	52	100.0	24	100.0	33	100.0	4	100.0	109	100.0

By Hospital

The overall proportion of stressful situations identified by nurses in different hospitals varied from 39.3 to 69.6 percent, as shown in table 56.

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TABLE 56

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PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS IDENTIFIED, BY HOSPITAL

	Hospital															
	1		2		3		4		5		6		7		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations	24	39.3	29	50.0	16	69.6	6	54.5	5	50.0	16	69.6	17	48.6	113	51.1
Satisfying Situations	37	60.7	29	50.0	7	30.4	5	45.5	5	50.0	7	30.4	18	51.4	108	48.9
Total Situations	61	100.0	58	100.0	23	100.0	11	100.0	10	100.0	23	100.0	35	100.0	221	100.0

Nurses in children's hospitals identified 24.5 percent less stress related to procedures, and 31.3 percent more stress related to the body, than nurses in general hospitals, as shown in tables 57 and 58.

TABLE 57

PROPORTION OF STRESSFUL SITUATIONS RELATED TO PROCEDURES, BY HOSPITAL TYPE

	Hospital Type					
	General-Acute		Children's		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to Procedures	22	27.5	1	3.0	23	20.4
Other Stressful Situations	58	72.5	32	97.0	90	79.6
Total Stressful Situations	80	100.0	33	100.0	113	100.0

TABLE 58

PROPORTION OF STRESSFUL SITUATIONS RELATED TO THE BODY, BY HOSPITAL TYPE

	Hospital Type					
	General-Acute		Children's		Total	
	No.	%	No.	%	No.	%
Stressful Situations Related to the Body	21	26.3	19	57.6	40	35.4
Other Stressful Situations	59	73.7	14	42.4	73	64.6
Total Stressful Situations	80	100.0	33	100.0	113	100.0

Discussion

Nurses reported that large proportions of stress perceived by children were related to bodily functions and procedures. Very little emphasis was placed by nurses on the stressful effects of parental absence. This pattern suggests that the obvious, physical determinants of stress are much more likely to be identified by nurses than the psychological determinants, which are more individualized for each child.

Nurses with less than one year of pediatric experience reported more stress as related to procedures, while those with four or more years of pediatric experience reported less procedure-related stress. The tendency of new nurses to perceive more procedure-related stress, while experienced nurses perceived less, seems to indicate that the new nurse is still at the "physical" level of care.

Nurses with more experience identified greater proportions of total situations as stressful, suggesting that experience is accompanied by greater awareness of all stress agents, not only procedural stress agents. These findings are consistent with Blake's comment[1] that new nurses are unable to cope effectively with psychological care until they feel comfortable with the physical aspects of care.

Nurses in children's hospitals, and those having cared for the child more than six days, reported less stress related to procedures and more related to the body. The type of hospital and length of care are related variables, as most nurses in children's hospitals cared for the same child for longer periods. The tendency to emphasize bodily function seems consistent with long-term disabilities. In addition, if one nurse cared for a child more than six days, the likelihood is that the child was a long-term patient, for whom less procedures were apt to be performed than if he were a short-term patient.

Nurses who were not hospitalized as children identified more body-related stress than nurses who had been hospitalized. This finding is contrary to what one might expect. Perhaps nurses who have not experienced childhood hospitalization tend to over-estimate the stressful effects of disturbed bodily function.

Nurses who were mothers reported more people-related stress, and non-mothers who had regular contact with children reported a greater proportion of total situations as stressful than those

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[1]Florence Blake, "In Quest of Hope and Autonomy," Nursing Forum 1 (Winter 1961-62): 10.

without such contact. Familiarity with children outside of a work setting seems to predispose towards identification of more stress.

Nurses who had regular contact with children also reported more body-related satisfaction, as did nurses over thirty years old. Of the over-30 nurses, 62.5 percent were mothers. The pattern thus emerges that familiarity with children is also related to more reports of body-related satisfaction.

The relationship of the nurse's education and the proportion of total situations reported as stressful is uncertain. CNA's and BSN's reported the highest proportion of stress; staff with less than CNA education reported no stress. RN's reported smaller proportions, and student nurses' reports were mid-range. Possible suggestions regarding the reasons for such a pattern are: (1) Student nurses may be more keenly aware of psychological needs than RN's because they are still learning; they may also have more time to spend with individual patients due to smaller assignments. (2) Baccalaureate-prepared nurses have more educational background in the social sciences, which logically should assist them in identifying stress. (3) CNA's, although less educated, may have more direct patient contact than RN's, who generally have additional duties such as team-leading. The time factor alone may account for the CNA's awareness of the occurrence of a situation.

The reader is reminded that the foregoing discussion relates to situations <u>identified</u> by nurses as stressful or satisfying to children. The <u>agreement</u> of the identified situations will be discussed in chapter V.

CHAPTER V

PRESENTATION AND ANALYSIS OF AGREEMENT BETWEEN CHILDREN AND NURSES

Agreement for Total Number of Situations

Agreement between nurse and child was defined as a nurse's identification of the same situation that the child reported as stressful or satisfying. As mentioned earlier, children reported a total of 148 stressful situations. Nurses identified 113 situations in which they thought the child perceived stress; only 32 of these situations were in agreement with the children's reports. Thus only 21.6 percent of children's reported stress situations were identified by nurses, and only 28.3 percent of situations which nurses reported they thought were stressful to children were actually reported by the children.

Children reported a total of 288 satisfying situations. Of these, 49 situations, or 17.0 percent were identified by nurses. The nurses reported 108 situations in which they thought children perceived satisfaction, but only 45.4 percent of these situations were reported by the children.

In addition, children reported 9 ambivalent situations, while nurses identified 5 ambivalent situations. In two of these situations, the nurse and child agreed.

The following table summarizes the above findings.

TABLE 59

AGREEMENT BETWEEN NURSE AND CHILD

	Stress		Satisfaction		Ambivalence		Total	
	No.	%	No.	%	No.	%	No.	%
Total Situations Reported by Child	148	100.0	288	100.0	9	100.0	445	100.0
Total Situations Agreed	32	21.6	49	17.0	2	22.2	83	18.7
Situations Reported by Child, Not Identified by Nurse	116	78.4	239	83.0	7	77.8	362	81.3
Total Situations Identified by Nurse	113	100.0	108	100.0	5	100.0	226	100.0
Total Situations Agreed	32	28.3	49	45.4	2	40.0	83	36.7
Situations Identified by Nurse, Not Reported by Child	81	71.7	59	54.6	3	60.0	143	63.3

Nurses agreed with <u>at least one</u> situation reported by 50 of the 70 children (71.4 percent). For 20 children (28.6 percent) the nurses did not correctly identify <u>any</u> situations.

<u>Agreement by Nurse's Age</u>

Nurses aged 31 to 40 had the lowest rate of agreement with children (6.5 percent), while nurses 26 to 30 and over 40 had the highest rates (22.1 percent and 27 percent respectively), as shown in table 60. The above pattern was repeated in relation to agreement with satisfying situations, as shown in table 61.

TABLE 60

TOTAL SITUATION AGREEMENT, BY AGE OF NURSE

	Age of Nurse											
	20 or less		21-25		26-30		31-40		41+		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Situations Agreed[a]	7	20.0	37	19.2	17	22.1	5	6.5	17	27.0	83	18.7
Situations Not Agreed[a]	28	80.0	156	80.8	60	77.9	72	93.5	46	73.0	362	81.3
Total Situations	35	100.0	193	100.0	77	100.0	77	100.0	63	100.0	445	100.0

[a]All tables in this chapter, unless otherwise noted, will refer to "situations" reported by children.

TABLE 61

SATISFYING SITUATION AGREEMENT BY AGE OF NURSE

	Age of Nurse											
	Less than 20		21-25		26-30		31-40		41+		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Agreed	6	20.7	19	17.4	10	17.9	2	3.8	12	29.3	49	17.0
Satisfying Situations Not Agreed	23	79.3	90	82.6	46	82.1	51	96.2	29	70.7	239	83.0
Total	29	100.0	109	100.0	56	100.0	53	100.0	41	100.0	288	100.0

The number of children for whom nurses correctly identified at least one situation was 18 percent larger for nurses under 30 than for those 30 and over. (See table 62.)

TABLE 62

CHILDREN AGREED WITH, BY AGE OF NURSE

	Age of Nurse					
	Under 30		30 and over		Total	
	No.	%	No.	%	No.	%
Children Agreed With	37	77.1	13	59.1	50	71.4
Children Not Agreed With	11	22.9	9	40.9	20	28.6
Total Children	48	100.0	22	100.0	70	100.0

Agreement by Nurse's Childhood Hospitalization Experience

Total situation agreement varied less than 2 percent between nurses with and without childhood hospitalization experience.[1] Nurses who had not been hospitalized in childhood agreed with 11 percent more satisfying and 12.5 percent less stressful situations than nurses with a childhood hospitalization experience. (See tables 63 and 64 below.) The total number of children for whom nurses correctly identified at least one situation was 15.5 percent greater for nurses without a childhood hospitalization experience. (See table 65.)

[1]Refer to table 94, appendix III.

TABLE 63

SATISFYING SITUATION AGREEMENT, BY NURSE'S CHILDHOOD HOSPITALIZATION EXPERIENCE

	Childhood Hospitalization					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Agreed	13	9.5	31	20.5	44	15.3
Satisfying Situations Not Agreed	124	90.5	120	79.5	244	84.7
Total	137	100.0	151	100.0	288	100.0

TABLE 64

STRESSFUL SITUATION AGREEMENT, BY NURSE'S CHILDHOOD HOSPITALIZATION EXPERIENCE

	Childhood Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Stressful Situations Agreed	26	30.2	11	17.7	37	25.0
Stressful Situations Not Agreed	60	69.8	51	82.3	111	75.0
Total Stressful Situations	86	100.0	62	100.0	148	100.0

TABLE 65

CHILDREN AGREED WITH, BY NURSE'S CHILDHOOD HOSPITALIZATION EXPERIENCE

	Childhood Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Children Agreed With	23	63.9	27	79.4	50	71.4
Children Not Agreed With	13	36.1	7	20.6	20	28.6
Total Children	36	100.0	34	100.0	70	100.0

Agreement by Motherhood Status of Nurse

Nurses who were mothers agreed with 14.7 percent less satisfying situations than non-mothers, as shown in table 66. Less than 2 percent differences in agreement with total situations or stressful situations were found between mothers and non-mothers. (See tables 95 and 96, appendix III.) Mothers agreed on at least one situation with 11.6 percent less children than non-mothers. (See table 67.)

TABLE 66

SATISFYING SITUATION AGREEMENT, BY MOTHERHOOD OF NURSE

	Mothers		Non-mothers		Not Reported		Total	
	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Agreed	12	18.2	71	32.9	0	0.0	83	28.8
Satisfying Situations Not Agreed	54	81.8	145	67.1	6	100.0	205	71.2
Total Satisfying Situations	66	100.0	216	100.0	6	100.0	288	100.0

TABLE 67

CHILDREN AGREED WITH, BY MOTHERHOOD OF NURSE

	Motherhood Status					
	Mothers		Non-Mothers		Total	
	No.	%	No.	%	No.	%
Children Agreed With	10	62.5	40	74.1	50	71.4
Children Not Agreed With	6	37.5	14	25.9	20	28.6
Total Children	16	100.0	54	100.0	70	100.0

Agreement by Contact with Children

Nurses who were not mothers were classified according to whether or not they had regular contact with children, apart from nursing contact. Those with regular contact agreed with 9.1 percent less total situations, 13.1 percent less stressful situations, and 8.2 percent less satisfying situations than those with no contact, as shown in tables 68 to 70. Nurses with regular contact also agreed on at least one situation with 16.2 percent less children. (See table 71.) These findings are opposite to what would be expected.

TABLE 68

TOTAL SITUATION AGREEMENT, BY CONTACT WITH CHILDREN

	Contact With Children					
	Contact		No Contact		Total	
	No.	%	No.	%	No.	%
Total Situations Agreed	49	17.7	15	26.8	64	19.2
Total Situations Not Agreed	228	82.3	41	73.2	269	80.8
Total Situations	277	100.0	56	100.0	333	100.0

TABLE 69

STRESSFUL SITUATION AGREEMENT, BY CONTACT WITH CHILDREN

	Contact with Children					
	Contact		No Contact		Total	
	No.	%	No.	%	No.	%
Stressful Situations Agreed	21	20.2	4	33.3	25	21.6
Stressful Situations Not Agreed	83	79.8	8	66.7	91	78.4
Total Stressful Situations	104	100.00	12	100.00	116	100.0

TABLE 70

SATISFYING SITUATION AGREEMENT, BY CONTACT WITH CHILDREN

	Contact with Children					
	Contact		No Contact		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Agreed	25	14.5	10	22.7	35	16.1
Satisfying Situations Not Agreed	148	85.5	34	77.3	182	83.9
Total Satisfying Situations	173	100.0	44	100.0	217	100.0

TABLE 71

CHILDREN AGREED WITH, BY CONTACT WITH CHILDREN

	Contact with Children					
	Contact		No Contact		Total	
	No.	%	No.	%	No.	%
Children Agreed With	31	73.8	9	90.0	40	76.9
Children Not Agreed With	11	26.2	1	10.0	12	23.1
Total Children	42	100.0	10	100.0	52	100.0

Agreement by Nurse's Education

Agreement with total situations by nurses with differing educational qualifications varied by less than 8 percent.[1] Registered and baccalaureate degree nurses agreed with 10.1 percent more stressful situations than CNA's, and 5.6 percent more satisfying situations than student nurses. (See tables 72 and 73.) Nurses with an RN or BSN agreed on at least one situation with 32.4 percent more children than student nurses, and with 19 percent more children than CNA's. (See table 74.)

[1]Refer to table 97, appendix III.

TABLE 72

STRESSFUL SITUATION AGREEMENT, BY EDUCATION OF NURSE

	Education of Nurse							
	CNA/CNO or less		Student Nurse		RN or more		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations Agreed	11	16.7	6	23.1	15	26.8	32	21.6
Stressful Situations Not Agreed	55	83.3	20	76.9	41	73.2	116	78.4
Total Stressful Situations	66	100.0	26	100.0	56	100.0	148	100.0

TABLE 73

SATISFYING SITUATION AGREEMENT, BY EDUCATION OF NURSE

	Education of Nurse							
	CNA/CNO or less		Student Nurse		RN or more		Total	
	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Agreed	20	17.2	7	13.0	22	18.6	49	17.0
Satisfying Situations Not Agreed	96	82.8	47	87.0	96	81.4	239	83.0
Total Satisfying Situations	116	100.0	54	100.0	118	100.0	288	100.0

TABLE 74

CHILDREN AGREED WITH, BY EDUCATION OF NURSE

	Education of Nurse							
	CNA/CNO or less		Student Nurse		RN or more		Total	
	No.	%	No.	%	No.	%	No.	%
Children Agreed With	18	66.7	8	53.3	24	85.7	50	71.4
Children Not Agreed With	9	33.3	7	46.7	4	14.3	20	28.6
Total Children	27	100.0	15	100.0	28	100.0	70	100.0

Agreement by Nurse's Experience

There was less than 4 percent difference in agreement with total and satisfying situations by nurses with different lengths of pediatric experience.[1] Nurses with one to three years of pediatric experience agreed with 7 percent more stressful situations than those with less than one year, and 5.8 percent more than those with four or more years of experience. (See table 75.)

[1] See tables 98 and 99, appendix III.

TABLE 75

STRESSFUL SITUATION AGREEMENT, BY NURSE'S PEDIATRIC EXPERIENCE

	Length of Pediatric Experience							
	Less than 1 yr.		1-3 yrs.		4 or more yrs.		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations Agreed	10	19.2	11	26.2	11	20.4	32	21.6
Stressful Situations Not Agreed	42	80.8	31	73.8	43	79.6	116	78.4
Total Situations	52	100.0	42	100.0	54	100.0	148	100.0

Nurses with eleven or more years of <u>total</u> experience agreed with 5.4 percent less total situations than any other nurses. (See table 76.) Those with three to five years of total experience agreed with 4.7 percent less stressful, and 8.7 percent more satisfying situations than any other nurses. (See tables 77 and 78.) The number of children agreed with for at least one situation decreased as total experience increased. (See table 79.)

TABLE 76

TOTAL SITUATION AGREEMENT, BY NURSE'S TOTAL EXPERIENCE

	Length of Total Experience											
	Less than 1 yr.		1-2 yrs.		3-5 yrs.		6-10 yrs.		11 or more yrs.		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Situations Agreed	18	18.2	22	17.6	15	23.4	23	19.8	5	12.2	83	18.7
Situations Not Agreed	81	81.8	103	82.4	49	76.6	93	80.2	36	87.8	362	81.3
Total Situations	99	100.0	125	100.0	64	100.0	116	100.0	41	100.0	445	100.0

TABLE 77

STRESSFUL SITUATION AGREEMENT, BY NURSE'S TOTAL EXPERIENCE

	Length of Total Experience											
	Less than 1 yr		1-2 yrs		3-5 yrs		6-10 yrs		11 or more yrs		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations Agreed	6	20.7	11	23.4	4	16.0	8	23.5	3	23.1	32	21.6
Stressful Situations Not Agreed	23	79.3	36	76.6	21	84.0	26	76.5	10	76.9	116	78.4
Total Stressful Situations	29	100.0	47	100.0	25	100.0	34	100.0	13	100.0	148	100.0

TABLE 78

SATISFYING SITUATION AGREEMENT, BY NURSE'S TOTAL EXPERIENCE

			Length of Total Experience									
	Less than 1 yr		1-2 yrs		3-5 yrs		6-10 yrs		11 or more yrs		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Agreed	12	17.9	10	13.3	10	27.0	15	18.3	2	7.4	49	17.0
Satisfying Situations Not Agreed	55	82.1	65	86.7	27	73.0	67	81.7	25	92.6	239	83.0
Total Satisfying Situations	67	100.0	75	100.0	37	100.0	82	100.0	27	100.0	288	100.0

TABLE 79

CHILDREN AGREED WITH, BY NURSE'S TOTAL EXPERIENCE

	Length of Total Experience							
	Less than 1 yr		1-5 yrs		6 or more yrs		Total	
	No.	%	No.	%	No.	%	No.	%
Children Agreed With	12	80.0	21	72.4	17	65.4	50	71.4
Children Not Agreed With	3	20.0	8	27.6	9	34.6	20	28.6
Total Children	15	100.0	29	100.0	26	100.0	70	100.0

Agreement by Length of Time Nurse Cared for Child

Nurses who had cared for a child one day only agreed with 3.8 percent less total situations than nurses who had cared for a child more than one day.[1] The former nurses agreed with at least one situation for 19.6 percent less children than the latter. (See table 80.) Nurses caring for a child two to five days agreed with 15.4 percent more stressful situations as those with one day, or more than five days of care. (See table 81.) These same nurses agreed with the lowest proportion of satisfying situations. Nurses who had cared for a child eleven or more days agreed with the greatest proportion of satisfying situations. (See table 82.)

[1]See table 100, appendix III.

TABLE 80

CHILDREN AGREED WITH, BY LENGTH OF CARE

	Length of Care					
	1 day		More than 1 day		Total[a]	
	No.	%	No.	%	No.	%
Children Agreed With	24	63.2	24	82.8	48	71.6
Children Not Agreed With	14	36.8	5	17.2	19	28.4
Total Children	38	100.0	29	100.0	67	100.0

TABLE 81

STRESSFUL SITUATION AGREEMENT, BY LENGTH OF CARE

	Length of Care									
	1 day		2-5 days		6 or more days		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Stressful Situations Agreed	14	17.5	12	33.3	5	17.9	1	25.0	32	21.6
Stressful Situations Not Agreed	66	82.5	24	66.7	23	82.1	3	75.0	116	78.4
Total Stressful Situations	80	100.0	36	100.0	28	100.0	4	100.0	148	100.0

TABLE 82

SATISFYING SITUATION AGREEMENT, BY LENGTH OF CARE

	Length of Care											
	1 Day		2-5 Days		6-10 Days		11 or more Days		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Agreed	22	16.1	11	13.6	6	19.4	9	28.1	1	14.3	49	17.0
Satisfying Situations Not Agreed	115	83.9	70	86.4	25	80.6	23	71.9	6	85.7	239	83.0
Total Satisfying Situations	137	100.0	81	100.0	31	100.0	32	100.0	7	100.0	288	100.0

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Agreement by Hospital

Nurses in individual hospitals varied from 10.3 to 34.8 percent in agreement with total situations. (See table 83.)

TABLE 83

TOTAL SITUATION AGREEMENT BY HOSPITAL

	Hospital															
	1		2		3		4		5		6		7		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Situations Agreed	20	15.3	24	21.8	8	22.2	4	10.3	7	15.6	8	34.8	12	19.7	83	18.7
Situations Not Agreed	111	84.7	86	78.2	28	77.8	35	89.7	38	84.4	15	65.2	49	80.3	362	81.3
Total Situations	131	100.0	110	100.0	36	100.0	39	100.0	45	100.0	23	100.0	61	100.0	445	100.0

Nurse's working in children's hospitals agreed with 10.7 percent more satisfying situations reported by children, and with 16.2 percent more children on at least one situation, than nurses in general-acute hospitals. (See tables 84 and 85.)

TABLE 84

SATISFYING SITUATION AGREEMENT, BY HOSPITAL TYPE

	Hospital Type					
	General-Acute		Children's		Total	
	No.	%	No.	%	No.	%
Satisfying Situations Agreed	35	15.2	15	25.9	50	17.4
Satisfying Situations Not Agreed	195	84.8	43	74.1	238	82.6
Total Situations Agreed	230	100.0	58	100.0	288	100.0

TABLE 85

CHILDREN AGREED WITH, BY HOSPITAL TYPE

	Hospital Type					
	General Acute		Childrens		Total	
	No.	%	No.	%	No.	%
Children Agreed With	39	68.4	11	84.6	50	71.4
Children Not Agreed With	18	31.6	2	15.4	20	28.6
Total Children	57	100.0	13	100.0	70	100.0

There was only 1.1 percent difference in agreement for stressful situations between nurses in general-acute and children's hospitals.[1]

Agreement by Cultural Differences Between Nurse and Child

Nurses who reported their culture as "very different" from that of the child correctly identified 9.6 percent more satisfying situations and 7.8 percent less stressful situations than nurses who reported their culture as the same as the child's. (See tables 86 and 87.) There was less than 4 percent difference in agreement with total situations.[2] Nurses with cultural differences from the child agreed with at least one situation for 6.6 percent more children.[3]

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[1]See table 101, appendix III.

[2]See table 102, appendix III.

[3]See table 103, appendix III.

TABLE 86

SATISFYING SITUATION AGREEMENT, BY CULTURAL DIFFERENCES

	Cultural Differences							
	Yes		No		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Agreed	23	24.2	24	14.6	2	6.9	49	17.0
Satisfying Situations Not Agreed	72	75.8	140	85.4	27	93.1	239	83.0
Total Satisfying Situations	95	100.0	164	100.0	29	100.0	288	100.0

TABLE 87

STRESSFUL SITUATION AGREEMENT, BY CULTURAL DIFFERENCES

	Cultural Differences							
	Yes		No		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations Agreed	10	18.2	20	26.0	2	12.5	32	21.6
Stressful Situations Agreed	45	81.8	57	74.0	14	87.5	116	78.4
Total Stressful Situations	55	100.0	77	100.0	16	100.0	148	100.0

Agreement by Previous Participation in Study

Because the process of random selection was applied to children, the same nurse on some occasions participated in the study more than one time, although each time in relation to a different child. To determine if having previously participated in the study had any systematic influence on the nurse's agreement with the child, nurses' responses were analyzed in terms of previous participation. Less than one-half of one percent difference was found between the two groups. (See table 104, appendix III.)

Agreement by Presence of Nurse During Interview

In several situations, the child's nurse was present in the room (attending to another child) for a portion of the time during which the child was being interviewed.[1] To determine if the nurse's responses were influenced by any of the interview she might have overheard, nurse-child agreement was analyzed in terms of the nurse's presence in the room during part of the interview. Nurses who were present agreed with 7.9 percent less situations than those who were not,[2] lending support to the argument that presence of the nurse in the room did not increase the agreement. The nurse's presence could possibly have been a source of bias in that it may have influenced the child's responses. However, in rooms with more than one patient, the interviewer had drawn the curtains around the child's bed to maintain privacy, so it is doubtful if the child was even aware of the nurse's presence.

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[1] In almost all instances, this time was minimal, and during the initial part of the interview, where factual information such as the child's age was being obtained.

[2] See table 105, appendix III.

Agreement by Variables Describing Children

Nurse agreement with the child was also analyzed in terms of demographic and illness-related variables relevant to the child, to determine if nurses agreed more often with children possessing certain characteristics. No relationships were found between agreement and age, sex, length of stay, previous hospitalization, or admission circumstances of the child.[1] Nurses agreed with 9.3 percent more situations reported by local children than by out-of-province children (table 88). Nurses agreed with 7.3 percent less situations reported by children hospitalized for surgery than by those hospitalized for medical reasons, as shown in table 89.

TABLE 88

TOTAL SITUATION AGREEMENT, BY ADDRESS OF CHILD

	Address of Child							
	Local		Alberta		Out-of Province		Total	
	No.	%	No.	%	No.	%	No.	%
Situations Agreed	41	19.1	38	20.1	4	9.8	83	18.7
Situations Not Agreed	174	80.9	151	79.9	37	90.2	362	81.3
Total Situations	215	100.0	189	100.0	41	100.0	445	100.0

[1] See tables 106 to 110, appendix III.

TABLE 89

TOTAL SITUATION AGREEMENT, BY DIAGNOSIS OF CHILD

	Diagnosis of Child							
	Medical		Surgical		Diagnostic		Total	
	No.	%	No.	%	No.	%	No.	%
Situations Agreed	36	22.0	30	14.7	17	22.1	83	18.7
Situations Not Agreed	128	78.0	174	85.3	60	77.9	362	81.3
Total Situations	164	100.0	204	100.0	77	100.0	445	100.0

Agreement Regarding Most Stressful and Most Satisfying Situations

From the situations children reported, they were asked to choose the one most stressful and one most satisfying situation. Nurses were also asked to identify the situations they thought the child perceived as most stressful and most satisfying.

The situation reported by the child as most stressful was identified by the nurse as most stressful in 10 out of 70 cases (14.3 percent). Eight more nurses identified as stressful the situation reported as most stressful by the child, but did not rank it as most stressful.

The child's reported most satisfying situation was identified as most satisfying by twelve nurses (17.1 percent). An additional nine nurses identified as satisfying the most satisfying situation reported by the child, but did not rank it as most satisfying.

Three nurses identified and ranked both the most satisfying and the most stressful situations reported by the child, while two

nurses identified but did not correctly rank both the most stressful and most satisfying situations reported.

Relationship Between Agreement and Day on Which Situation Occurred

Of the 83 situations in which nurse and child agreed, 61 (73.5 percent) occurred on the day of the interview, while 22 (26.5 percent) occurred the day prior to the interview.

In 10 of the 22 situations where nurse and child agreed which occurred on the day prior to the interview, the nurse had cared for the child on the previous day. In 11 situations she had not cared for the child the previous day. In one situation this information was not reported. The agreement on situations occurring the day before the interview thus did not appear to be related to whether or not the nurse cared for the child the day before.

Discussion

Of the 436 stressful and satisfying situations reported by children, nurses agreed with only 18.7 percent. The percentage agreement for stressful situations was slightly higher than that for satisfying situations. On the basis of the above findings, it appears that the nurses in the sample studied had a very meagre ability to identify children's perceptions of stressful and satisfying situations. This study lends support to Hawthorn's finding that the nurses she studied showed a fundamental lack of knowledge of children's emotional needs.[1]

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[1] Hawthorn, Nurse--I Want My Mummy, p. 184.

One might have expected that nurses would more readily agree with the most stressful and most satisfying situations reported by the children. However, one could argue that attempting to rank a child's perceptions is even more difficult than identifying them. In this study, nurses correctly identified less of the most stressful situations (14.3 percent compared to 21.6 percent of all stressful situations), and virtually the same amount of most satisfying situations (17.1 percent compared to 17.0 percent of all satisfying situations).

Several variables which were reported earlier as inter-related, namely, the nurse's age and motherhood status, were related to agreement with satisfying situations. While it was noted in chapter IV that nurses who were mothers, those over thirty, and those non-mothers with regular child contact reported more body-related satisfaction, a similar group of nurses (mothers, and those aged 31 to 40) agreed with children's reports of satisfaction less frequently than non-mothers, and nurses under 30 and over 40. Similarly, non-mothers who had regular contact with children agreed with less total situations than non-mothers without regular child contact. These findings are contrary to what one would expect. One possibility is that the above-described nurses, because of their general familiarity with children, consider that they are aware of what is satisfying to children in general, and consequently pay less attention to what is perceived as satisfying by an individual child. As will be recalled, many of the satisfying situations reported by children were very individualized, sometimes with the same type of

situation reported as satisfying by one child and stressful by another.

Brainerd states that the more empathy a nurse has for a patient, the better able she will be to care for and support him.[1] If this is true, one would expect the nurse who had personally experienced childhood hospitalization to be able to empathize with a child; this empathy would likely assist the nurse in identifying children's perceptions related to hospitalization. However, in this study, nurses who were hospitalized as children were only slightly more accurate in identifying stressful situations and less accurate in identifying satisfying situations than those with no childhood hospitalization. A number of factors may be theorized to account for this apparent contradiction. One possibility might be that the nurses' own hospitalization experiences were negative. Such experiences could conceivably color the nurses' perceptions so that they might find it difficult to identify hospital-related satisfaction. Future studies might explore such a relationship.

Nurses whose cultural backgrounds were reported as very different from those of the children agreed with more satisfying situations than those with similar cultures. One might speculate that perhaps nurses who have to learn about our culture are more sensitive because of personal experience with new environments. However, this suggestion would have to be further tested, as from the

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[1]Brainerd, "A Creative Approach to Individualized Nursing Care," p. 190.

data available, it was unknown whether the nurse's or the child's culture was atypical to Western Canada, and the total number of nurses in this category was small. In addition, nurses whose culture differed from the child agreed with slightly less stressful situations than nurses with similar cultures.

No clear relationships were established between agreement and length of nursing experience. One would expect more agreement from more experienced nurses. However, nurses with eleven or more years experience agreed with less situations than those with less than ten years of experience. Nurses with one to three years of pediatric experience agreed with the most stressful situations. Further studies would be required to determine if other variables interact with experience to produce such uncertain results, or if the findings were simply a function of the unique characteristics of the particular group of nurses studied.

Several findings of the study were more consistent with what one might expect. Children's hospital nurses were more often correct in identifying satisfaction. Perhaps the opportunity to get to know the child over a longer time period, or a different care emphasis in a pediatric hospital were influencing factors.

Menzies claims that the organization of nursing services "militates against close and prolonged contact between the individual patient and nurse."[1] This statement was borne out in the present study, where over 54 percent of the nurses questioned had cared for

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[1]Menzies, "Nurses Under Stress," p. 10.

the child only one day. These nurses agreed with slightly less total situations than nurses who had cared for the child longer, and agreed with twenty percent less children in at least one situation. Nurses who had cared for a child two-to five days agreed with more stressful situations, but less satisfying ones. The most satisfying situations were agreed with by nurses who had cared for a child eleven or more days. Thus, in this study, it was clear that more child-nurse agreement was obtained when nurses cared for children for more than one day. Yet, the majority of nursing assignments were of such a nature that nurses did not care for a child more than one day.

Of the situations in which the nurse agreed with the child, 73.5 percent occurred the day of the interview, rather than the day before. The low number of situations agreed which occurred the day prior to the interview may have resulted from lack of nurse contact with the child prior to the day of the interview, lack of information transfer between staff, or failure to remember less recent events.

Staff identified themselves as related to 11.1 percent of satisfying situations, but children reported staff-related satisfaction in only 2.8 percent of situations. In addition, staff identified themselves as related to more satisfaction than parents, which was not in agreement with children's reports. Perhaps staff should pay closer attention to ways of becoming better "satisfiers".

Registered and baccalaureate degree nurses agreed with more situations than CNA's and student nurses. While in chapter IV it was reported that student nurses and CNA's reported more stressful situations than RN's, it is now apparent that the reports were not

always in agreement with the children. RN's reported less stressful situations, but with a higher degree of accuracy than student nurses and CNA's.

Conclusions

As this study involved a small sample, and was exploratory in nature, the findings presented are not intended to be conclusive. In fact, the study has raised more questions than it has answered.

The reader is reminded of several limitations mentioned earlier when considering the findings of this study. There may be a discrepancy between what the child reported and what he actually perceived and reacted to; similarly, the nurse may have reported that she thought a situation was stressful to the child, but actually responded to another situation which she did not report. Thus, the discrepancy between nurse's and child's reported perceptions could conceivably be a function of the reporting only.

In addition, this study was based on a small group of children and nurses which were treated as a population. Similar findings would have to be obtained with other populations before any conclusive statements could be made.

The major research question, that is, whether the nurse's and child's perceptions of stress and satisfaction are in agreement, has been answered most convincingly for the children and nurses studied. In the study population, nurses did not correctly identify even one-quarter of children's perceptions. If the premise of this study, i.e., that ability to identify children's perceptions is a necessary condition to individualized patient care, is true, such a finding should give the nurses in this study pause to consider whether the

care they give is truly individualized. However, before being too harsh on the nurses, the reader must be warned that the small amount of agreement between nurses and children found in this study could be due to (1) actual inability of the nurses to identify children's perceptions of stress and satisfaction, or (2) the design of the study. The latter qualification is explained in detail below.

Ideally, the perceptions of nurses and children should have been compared by having both groups respond to the same question, for example, "Was a given situation stressful?" Such an approach would have ensured that the same method of measurement was used for both children and nurses.

However, the alternative of presenting a structured set of potentially stressful situations to a child was rejected on ethical grounds. Suggesting possible sources of stress to a child might have sensitized him so that he would then have considered those situations as stressful, whereas otherwise they would not have been considered stressful. The decision to use an open-ended questionnaire left the investigator with a major validity problem.

By first asking the child and the nurse to identify stressful and satisfying situations, and then comparing the situations reported, in effect two methods of measurement were being used. The child's and the nurse's responses to the questions may have been based on different understandings of the question. That is, the nurse, because of such factors as her professional training, experience, and maturity, may have perceived and responded to a different question than the child responded to when she was asked, "What was stressful?" Therefore, the lack of agreement between children and nurses may be due simply to the

difference between two methods of measurement, rather than to actual inability of the nurse to identify children's perceptions.

In addition, perfect agreement between nurse and child cannot be expected: an adult is very unlikely to be able to agree with all that a child perceives; even the child's parent would have difficulty with such an assignment.

The purpose of this study, stated in chapter I, was to assist in improving the quality of nursing care by providing a more rational basis for individualized care. For the reasons cited above, the findings of the study cannot be considered conclusive. They do, however, raise questions which should lead nurses to attempt to validate their identification of children's perceptions.

CHAPTER VI

SUMMARY AND RECOMMENDATIONS

Summary

No studies have been located which deal specifically with children's perceptions of stressful and satisfying situations as they relate to hospitalization, and nurses' identification of those perceptions. This study was intended (1) to explore nurses' ability to correctly identify hospitalized children's perceptions, and (2) to examine demographic, organizational, and illness-related variables which might be related to such perceptions. The study was based on the premise that the nurse's ability to correctly identify children's perceptions is not a sufficient, but a necessary condition to ensuring the delivery of individualized patient care.

An exploratory research approach was chosen as the most suitable methodology. The study was conducted in the pediatric units of five general acute-care hospitals and two pediatric hospitals. A sample of seventy children between the ages of six and twelve was randomly selected from eligible patients in these units. Equal numbers of patients were selected from short-term and long-term length-of-stay strata.

Each child was interviewed using a semi-structured, open-ended interview schedule. The child was requested to report situations occurring on the day of and the day previous to the interview which

made him feel stressed or satisfied. Interviews were tape-recorded. Supplementary information about the child was obtained from the patient's chart.

The nurse caring for each child selected was asked to complete an open-ended questionnaire in which she was requested to identify situations in which she felt the child had felt stressed or satisfied.

Transcripts of the tape-recorded child interviews were prepared. All responses were then coded by two independent judges using the technique of content analysis.

The content analysis of children's responses indicated that stress reported was related to the following categories, in descending order of frequency: people, body, procedures, places, activities, and miscellaneous. Satisfaction was reported most frequently in relation to people, activities, body, places, miscellaneous, and procedures, again in descending order.

Long-term patients reported a greater proportion of satisfaction relating to their physical status than short-term patients. Patients aged ten to twelve reported more satisfaction related to people than those aged six to nine. Males reported a greater proportion of stressful situations than females. Females reported more satisfaction from activities, and more stress from absence of people than males. Satisfaction related to people and places was related to whether or not the child's home was local. Stress related to bodily activity was related to diagnostic category. Total number of situations reported, and proportions of stressful and satisfying situations differed among hospitals.

Analysis of nurses' responses indicated that nurses identified the following factors related to stress, in order of frequency: body, people, procedures, places, activities, and miscellaneous. Satisfying situations were identified as follows: people, activities, body, places, procedures, and miscellaneous.

Nurses 30 years and over identified more body-related satisfaction than those under 30. Nurses not hospitalized as children identified more body-related stress than those hospitalized in their childhood. Nurses who were mothers reported more stress related to people than non-mothers, while nurses who had some regular contact with children outside of hospital reported more body-related satisfaction than nurses with no child contact. CNA's and BSN degree nurses identified most stress. The proportion of situations reported as stressful increased with an increase in nursing experience. Less experienced nurses reported more procedure-related stress. The length of time a nurse cared for a child and type of hospital were related to reports of body and procedure-related stress.

Nurses agreed with the children's reports of stress in only 22 percent of situations, and with reports of satisfaction in only 17 percent. Nurses aged over 40, and 26 to 30 agreed with most situations. Nurses not hospitalized in childhood agreed with more satisfying and less stressful situations than those with hospitalization experience. Mothers agreed with less satisfying situations than non-mothers, and non-mothers with regular child contact apart from nursing contact agreed with less situations than those with no child contact. Nurses with three to five years of total

experience agreed with more satisfying and less stressful situations than other nurses. Agreement with satisfying situations was highest for nurses who had cared for a child eleven or more days; agreement with stressful situations, for nurses with two to five days of care. Children's hospital nurses agreed with more satisfying situations than nurses in general-acute hospitals. Nurses who reported their culture as "very different" from the child's agreed with more satisfying and less stressful situations than nurses of similar culture to the child.

Nurses' agreement with the most stressful and most satisfying situation for each child was even lower than general stress and satisfaction agreement. More agreement was reported for situations which occurred on the day of the interview than on the previous day.

The findings of the study suggest that the ability of the nurses studied to correctly identify children's reported perceptions of stressful and satisfying situations was very low. However, the lack of agreement between nurses and children may in fact be due to a source of invalidity in the study design.

Recommendations

Individualization of care is recognized in theory as an important aspect of nursing. In practice, nurses should be encouraged to attempt to validate their observations of children's perceptions of stress and satisfaction. They should check with the children to see if the situations which appear stressful or satisfying on the basis of their observations are perceived in the same way by the children. Several of the variables which are suggested in this study as influencing children's perceptions should be validated. For instance,

nurses could determine if parental absence does indeed cause stress to children; if so, visiting policies could be changed to encourage parents to spend more time with their children. Similarly, nurses could pay particular attention to out-of-town patients, to see if they do indeed receive less visitors, and if so, if sufficient personal attention is being paid to them.

Such validation of the nurse's observations and interpretations of children's perceptions would be a step forward in the rationalization of the delivery of nursing care.

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APPENDIX I

Dear Parent:

During the next few weeks a small study will be conducted on this ward by a registered nurse who is presently a master's student in Health Services Administration. Your child may be asked to participate by way of a short tape-recorded interview in which he would be asked to describe any situations which have occurred in the hospital that made him/her feel happy or unhappy. (All tapes will be erased at the end of the study). By finding out how children feel about their experiences in the hospital, we hope to be able to make their stay as pleasant as possible.

The anonymity of all children participating is guaranteed. Critically ill children will not be asked to participate in the study. If you do not wish your child to participate for any other reason, please tell the head nurse.

Sincerely,

Dear Parent:

During the next few weeks a small study will be conducted on this ward by a registered nurse who is presently a master's student in Health Services Administration. Your child may be asked to participate by way of a short tape-recorded interview in which he would be asked to describe any situations which have occurred in the hospital that made him/her feel happy or unhappy. (All tapes will be erased at the end of the study). By finding out how children feel about their experiences in the hospital, we hope to be able to make their stay as pleasant as possible.

The anonymity of all children participating is guaranteed. Critically ill children will not be asked to participate in the study. Should your child be asked to participate, please indicate below if you are willing for him to take part in the study.

Please check appropriate box:

☐ I do consent

☐ I do not consent for _____
Child's name

to participate if he/she is selected for the above-described study.

_____ _____
Date Parent's signature

_____
Witness

SMALL PRINT | POOR COPY

Dear Parent:

During the next few weeks a small study will be conducted on this ward by a registered nurse who is presently a master's student in Health Services Administration. Your child may be asked to participate by way of a short tape-recorded interview in which he would be asked to describe any situations which have occurred in the hospital that made him/her feel happy or unhappy. (All tapes will be erased at the end of the study). By finding out how children feel about their experiences in the hospital, we hope to be able to make their stay as pleasant as possible.

The anonymity of all children participating is guaranteed. Critically ill children will not be asked to participate in the study. Should your child be asked to participate, please indicate below if you are willing for him to take part in the study. No child will be interviewed unless both his parent and physician consent.

Please check appropriate box:

☐ I do consent

☐ I do not consent for _____
Child's name

to participate if he/she is selected for the above-described study.

_____ _____
Date Parent's signature

_____
Witness

☐ I do consent

☐ I do not consent for _____
Child's name

to participate if he/she is selected for the above-described study.

_____ _____
Date Physician's signature

April 15, 1976

Dear Doctor:

During the next three to four weeks a small study will be conducted on Station by a graduate student in Health Services Administration, in cooperation with the nursing department. A small number of children will be randomly selected to participate by way of a short tape-recorded interview in which they will be asked to describe any situations which have occurred in the hospital that made them feel stressed or satisfied. The nursing staff will be asked to identify situations in which they perceived that the child experienced stress or satisfaction.

Critically ill children will not be asked to participate in the study. The anonymity of all participants is guaranteed. Please notify the head nurse if you wish any particular patient of yours excluded from the study.

Sincerely,

(Nursing Supervisor or Head Nurse)

INTERVIEW SCHEDULE FOR THE CHILD

Date _____ Child I.D. _____

"Hi. I'm Jan Moore, and I'd like to find out what it's like for you being in the hospital. Could I talk to you for a few minutes? (Pause). Do you mind if I use this tape-recorder?

1. Could you tell me how old you are? 6 7 8 9 10 11 12

2. Do you have any brothers or sisters? ___yes ___no

3. Are any of them older than you? How many? ___

4. Are any of them younger than you? How many? ___

"Let's play this back now and see what we sound like."

5. Have you ever been in the hospital before? ___yes ___no

   IF YES: How did you feel about the last time?

6. Have you ever been away from home overnight without your Mom and Dad before? ___yes ___no

7. Has today been a good day or a bad day? (Randomize order of "good" and "bad").

   a. Would you tell me about what happened that made it good (bad)?

   b. What did you feel like when that happened?

   c. And then what else happened?

   d. When was that -- in the daytime (pause), after supper (pause) or at night (pause)?

   e. Was anyone with you when (incident) happened?

   f. Did anything else happen today that made you feel good or pleased or happy? (sad or unhappy or afraid or upset)?

   g. What about yesterday? Did anything happen that made it a good (bad) day? REPEAT PARTS a TO f.

8. Now let's see if we can remember all the things you told me that made you feel good. LIST.....
   Of all those things, which one made you feel the BEST?

   Now let's remember all the things you told me that made you feel unhappy. LIST..... Of all those things, which one made you feel the WORST?

Child's I.D. _____ Hospital _____ Unit ___

1. Time interview started _____; ended _____

2. Length of interview _____ minutes

3. Interview climate:

POOR COPY

	present but unobtrusive	minimal intrusion	moderate intrusion	high intrusion
other children in room				
"equipment" e.g. T.V. on in room				
staff interruption with patient				
adults with someone else in room				
noise outside room				

4. Number of occupied beds in room ____; unoccupied ____.

5. Child's nurse present in room during some or all of interview?
   1. Yes 2. No

6. Interviewer's subjective comment: _____

_____

7. Child's age 6 7 8 9 10 11 12

8. Date of admission _____

9. Length of hospitalization _____

10. Previous hospitalizations: _____
    date reason

_____
    date reason

11. Diagnosis _____ 1. Medical 2. Surgical
    3. Diagnostic 4. Other

12. Admission circumstances: 1. Elective 2. Unplanned

13. Birth rank of child: 1 2 3 4 __ not available

14. Address: 1. Edmonton 2. Alberta 3. Out of Alberta

15. Type of hospital: 1. general acute
    2. children's

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Dear Staff Member:

I am conducting a study in an attempt to find out what kinds of situations a child in the hospital regards as stressful and satisfying, and what kinds of situations his nurse regards as stressful and satisfying to him.

I would appreciate your cooperation in completing this questionnaire. To protect the anonymity of your replies, your head nurse will assign you a code number which you are requested to write in at the top of the questionnaire. While the head nurse will know your code number, she will receive no information from your questionnaire; conversely, while I will have your code number and your reply, I will never know your name. The list of code numbers will be destroyed by the head nurse at the end of the study.

Thank you for your assistance.

Sincerely,

(Mrs.) Jannice Moore

Division of Health Services
Administration
University of Alberta

Date _____ Nursing Staff's Anonymous Code Number ____
Child's I.D. _____

Wherever the term THIS PATIENT appears, it refers to:
When you have completed this questionnaire, please remove the name label and destroy it, to protect the anonymity of the child.

Please describe in detail all situations that occurred yesterday or today which involved THIS PATIENT, in which you feel that he/she felt satisfied (e.g. happy, pleased, contented, "good"). Please complete ALL the following questions for EACH situation. Additional sheets are available at the nursing station. Please number situations consecutively. After you have described all of the satisfying situations, please check (✓) the situation which you feel was MOST SATISFYING TO THE CHILD.

SATISFYING SITUATION NUMBER 1:

a. When did this situation occur? ☐ yesterday ☐ today

b. At what time of day did it occur? ☐ daytime ☐ after supper ☐ at night

c. Were you personally present during the situation? ☐ yes ☐ no

d. If you were not present, how did you find out about it? (Check one or more).

☐ patient's chart ☐ informal verbal exchange
☐ the patient ☐ team conference or shift report
☐ other _____ ☐ Kardex

e. Please describe the situation in terms of what happened, and what were the child's reactions, i.e. what did he say or do?

SATISFYING SITUATION NUMBER 2:

a. When did this situation occur? ☐ yesterday ☐ today

b. At what time of day did it occur? ☐ daytime ☐ after supper ☐ at night

c. Were you personally present during the situation? ☐ yes ☐ no

d. If you were not present, how did you find out about it? (Check one or more).

☐ patient's chart ☐ informal verbal exchange
☐ the patient ☐ team conference or shift report
☐ other _____ ☐ Kardex

e. Please describe the situation in terms of what happened, and what were the child's reactions, i.e. what did he say or do?

POOR COPY

PLEASE GET AN EXTRA SHEET FROM THE NURSING STATION IF YOU HAVE MORE SATISFYING SITUATIONS TO REPORT.

P.S. DON'T FORGET TO CHECK THE MOST SATISFYING SITUATION.

SMALL PRINT

Date _____ Nursing Staff's Anonymous Code Number _____
Child's I.D. _____

Whenever the term THIS PATIENT appears, it refers to:
When you have completed this questionnaire, please remove the name label and destroy it, to protect the anonymity of the child

Please describe in detail all situations that occurred yesterday or today which involved THIS PATIENT, in which you feel that he/she felt stressed (e.g. unhappy, sad, afraid, anxious, confused, nervous, over-tired). Please complete ALL of the following questions for EACH situation. Additional sheets are available at the nursing station. Please number situations consecutively. After you have described all of the stressful situations, please check (✓) the situation which you feel was MOST STRESSFUL TO THE CHILD.

STRESSFUL SITUATION NUMBER 1:

a. When did this situation occur? ☐ yesterday ☐ today

b. At what time of day did it occur? ☐ daytime ☐ after supper ☐ at night

c. Were you personally present during the situation? ☐ yes ☐ no

d. If you were not present, how did you find out about it? (Check one or more).

☐ patient's chart ☐ informal verbal exchange
☐ the patient ☐ team conference or shift report
☐ other _____ ☐ Kardex

e. Please describe the situation in terms of what happened, and what were the child's reactions, i.e. what did he say or do?

STRESSFUL SITUATION NUMBER 2:

a. When did this situation occur? ☐ yesterday ☐ today

b. At what time of day did it occur? ☐ daytime ☐ after supper ☐ at night

c. Were you personally present during the situation? ☐ yes ☐ no

d. If you were not present, how did you find out about it? (Check one or more).

☐ patient's chart ☐ informal verbal exchange
☐ the patient ☐ team conference or shift report
☐ other _____ ☐ Kardex

e. Please describe the situation in terms of what happened, and what were the child's reactions, i.e. what did he say or do?

POOR COPY

SMALL PRINT

PLEASE GET AN EXTRA SHEET FROM THE NURSING STATION IF YOU HAVE MORE STRESSFUL SITUATIONS TO REPORT.

P.S. DON'T FORGET TO CHECK THE MOST STRESSFUL SITUATION.

PLEASE FILL IN THE FOLLOWING DETAILS. ALL INFORMATION WILL REMAIN CONFIDENTIAL

1. How many days have you given care to THIS PATIENT? (Circle approximate total number of days, not necessarily consecutive).

   1 2 3 4 5 6 7

   8 9 10 11-14 15-21 22-28 more than 28

2. Did you care for THIS PATIENT yesterday? ☐ yes ☐ no

3. Is your cultural background very different from that of THIS PATIENT? ☐ yes ☐ no

4. Have you participated in this study before? ☐ yes ☐ no

5. What is your age? ☐ 20 or less ☐ 21-25 ☐ 26-30 ☐ 31-40 ☐ 41 or over

6. Were you ever hospitalized when you were a child? ☐ yes ☐ no

7. a. Do you have children of your own? ☐ yes ☐ no

   b. If YES, how many children do you have? ___

   c. What are their ages? ___, ___, ___, ___

   d. Have any of your children ever been hospitalized? ☐ yes ☐ no

8. Have you had any regular contact with children other than your own (brothers, sisters, nephews, nieces) in a family setting? ☐ yes ☐ no

   b. If YES, how long ago? (Check one or more).

   ☐ presently ☐ within the last year

   ☐ 1-2 years ago ☐ 3-5 years ago ☐ more than 5 years ago

9. What is the highest level of formal education you have?

   ☐ less than grade 12 ☐ registered nurse (3 year program)

   ☐ grade 12 ☐ registered nurse (2 year program)

   ☐ certified nursing assistant ☐ baccalaureate degree

   ☐ student nurse ☐ master's degree

   ☐ other (specify) _____

10. How long have you worked on pediatric nursing units, to the nearest year?

    ☐ less than 1 year ☐ 1 year ☐ 2 years

    ☐ 3 years ☐ 4-5 years ☐ more than 5 years

11. How long has your total active professional nursing experience been (including your pediatric experience)?

    ☐ less than 1 year ☐ 1-2 years ☐ 3-5 years ☐ 6-10 years

    ☐ 11-15 years ☐ 16-20 years ☐ more than 20 years

12. What is your present job title?

    ☐ head nurse ☐ certified nursing assistant

    ☐ team leader ☐ certified nursing orderly

    ☐ graduate nurse ☐ ward aide

    ☐ student nurse: year _____ ☐ other _____

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THANK YOU VERY MUCH FOR PARTICIPATING IN THIS STUDY.

PLEASE REMEMBER TO REMOVE THE NAME TABLET ON THE FRONT PAGE.

HOSPITAL INFORMATION

1. Hospital code number _____

2. Visiting policies:

   a. Restrictions on people: numbers _____

      type _____

   b. Time restrictions _____

   c. Other _____

UNIT INFORMATION

1. Unit number _____

2. Number of occupied beds _____

3.

	day		evening		night	
Number of staff	f.t.	p.t.	f.t.	p.t.	f.t.	p.t.
Total						
R.N.'s						
C.N.A.'s						
Students						
Other						

4. Nursing organization: 1. team 2. functional 3. Other

_____

APPENDIX II

CONTENT ANALYSIS CATEGORIES

Input Categories

A. PEOPLE

1. NURSE: includes RN, CNA, WA, CCW
2. DOCTOR: any physician, intern, or medical student
3. OTHER TREATMENT STAFF: e.g., physiotherapist
4. VOLUNTEER: also called play mother, volunteer visitor
5. PARENT(S): mother or father
6. OTHER RELATIVES OR FRIENDS: siblings, uncles, aunts, other visitors, friends other than patients
7. OTHER PATIENTS: room-mates, other children on the ward
8. THE PATIENT: the child being interviewed
9. MISCELLANEOUS PEOPLE: "people" not specified, or not included above

B. ACTIVITIES RELATED TO PROCEDURES

1. SURGERY: any procedure done in the operating room
2. NEEDLES: intramuscular, intravenous, subcutaneous, infusions
3. NURSING TREATMENTS OTHER THAN NEEDLES: e.g., catheterization, enema, temperature, nursing observation
4. MEDICATION: oral medication
5. TESTS: medical tests, e.g., lumbar puncture
6. X-RAYS: any radiological examination
7. TREATMENTS OTHER THAN NURSING: e.g., physiotherapy

C. ACTIVITIES RELATED TO THE BODY

1. PERSONAL CARE ACTIVITIES: e.g., bathing, washing, shampooing, toileting
2. PHYSICAL APPARATUS OR CONDITION: traction, casts, special bed such as Stryker frame, bed rest, physical location

3. DISTURBANCE OF NORMAL BODY FUNCTION: e.g., diarrhoea, emesis, disorientation, accidental injury

4. NORMAL BODY FUNCTION: e.g., walking, sitting, eating

5. FOOD

D. LOCATIONS

1. SCHOOL: a classroom in the hospital, or a bedside teacher

2. PLAYROOM: an area set aside on the unit for play activity

3. HOME

4. HOSPITAL: the experience of hospitalization itself, or mention of "hospital" other than playroom or school areas

E. RECREATIONAL ACTIVITIES

1. GAMES OR ACTIVITIES: games or activities with others, or alone

2. CRAFTS: handcraft activities, done in a group or individually

3. T.V., FILMS, AUDIO-VISUAL ACTIVITIES

4. SWIMMING OR GYMNASIUM ACTIVITIES

5. ACTIVITY OFF THE WARD: other than swimming or gymnasium

6. NO ACTIVITY

7. REST OR SLEEP

F. WEATHER: sunshine, rain, etc.

G. IMAGINED OR FANTASIZED THING OR ACTIVITY: e.g., ghosts, monsters

H. RELIGIOUS EXPERIENCE OR ACTIVITY

I. MISCELLANEOUS

1. MISCELLANEOUS THINGS: not specified, or not included above

2. PLEASANT FEELING: no reason given

3. UNPLEASANT FEELING: no reason given

Process Categories

1. Patient participated in X, watched X (active involvement)
2. X immobilized patient or part of patient's body
3. X was completed, discontinued, removed, changed
4. X was experienced by or done to patient (passive involvement)
5. Patient did not want to do X
6. X was boring
7. X was painful or uncomfortable
8. Patient was unable to, did not participate in X; X was interrupted
9. Patient was going to experience or go to X in the future
10. X was going to be present in the future
11. X was present, or paid attention to patient
12. X contacted patient, e.g. by phone or mail
13. X gave patient a gift
14. X was not pleasant to patient, did something patient disapproved of
15. X was not present
16. X did not contact patient
17. X was going to be absent in the future
18. X was fear or anxiety-producing (threat)
19. Threat that X might not be experienced, be done, or be present
20. X was pleasant to someone other than patient
21. X was experienced by someone other than patient
22. X was not pleasant to someone other than patient
23. X did something miscellaneous

Outcome Categories

1. STRESS: child felt unhappy, not happy, sad, afraid, upset, mad
2. SATISFACTION: child felt happy, glad, pleased, good
3. AMBIVALENCE: child felt elements of stress and satisfaction in same situation

DEFINITIONS OF CONTENT ANALYSIS CATEGORIES

INPUT: refers to a person or situation that was present at the time of the situation, who was instrumental in the situation. For example, "The nurse played with the patient."

Here the nurse is the INPUT.

"The patient had a blood test."

Here the blood test is the INPUT.

PROCESS: refers to what happened--what was the action?

For example, "The nurse played with the patient."

The PROCESS is playing with the patient.

"The patient had a blood test."

The PROCESS is "X was experienced by the patient."

OUTCOME: refers to how the patient felt about the input and process.

For example, "The patient was afraid of the blood test."

The OUTCOME is stress.

GENERAL INSTRUCTIONS FOR CODING

1. First code input (X), process (Y), and outcome (Z) for child.
2. Next code input, process, and outcome for nurse.
3. Indicate on which incidents child and nurse agree.
4. If the same situation evoked two conflicting emotions, code the the situation as ambivalent.
5. If the same situation is reported twice, with opposite emotions, record both situations as one incident, and code as ambivalent.
6. If treatment or action is the primary focus of the child's report, the treatment or action is the INPUT, even if done by someone.
7. If nurse's action to the patient is the primary focus, then nurse becomes the INPUT.
8. If two events are mentioned in the same sentence, record as two separate situations.
9. If situations are mentioned which did not occur TODAY or YESTERDAY, do not code them.
10. If child says presence of something is satisfying, and nurse says absence of the same thing is stressful, or vice versa, code as agreement.

APPENDIX III

TABLE 90

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY INTERVIEW SEQUENCE

	Interview Sequence							
	First Third		Second Third		Last Third		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	49	34.5	59	36.0	40	30.8	148	33.0
Satisfying Situations	93	65.5	105	64.0	90	69.2	288	67.0
Total Situations	142	100.0	164	100.0	130	100.0	436	100.0

TABLE 91

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY STRATUM

	Stratum					
	Short-term		Long-term		Total	
	No.	%	No.	%	No.	%
Stressful Situations	69	33.8	79	34.1	148	33.9
Satisfying Situations	135	66.2	153	65.9	288	66.1
Total Situations	204	100.0	232	100.0	436	100.0

TABLE 92

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY DIAGNOSIS

	Diagnosis							
	Medical		Surgical		Diagnostic		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations	53	33.1	71	35.5	24	31.6	148	33.9
Satisfying Situations	107	66.9	129	64.5	52	68.4	288	66.1
Total Situations	160	100.0	200	100.0	76	100.0	436	100.0

TABLE 93

PROPORTION OF STRESSFUL AND SATISFYING SITUATIONS REPORTED, BY ADMISSION CIRCUMSTANCES

	Admission Circumstances					
	Elective		Unplanned		Total	
	No.	%	No.	%	No.	%
Stressful Situations	54	35.8	94	33.0	148	33.9
Satisfying Situations	97	64.2	191	67.0	288	66.1
Total Situations	151	100.0	285	100.0	436	100.0

TABLE 94

TOTAL SITUATION AGREEMENT, BY NURSE'S CHILDHOOD HOSPITALIZATION EXPERIENCE

	Childhood Hospitalization Experience					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Situations Agreed	40	17.8	43	19.5	83	18.7
Situations Not Agreed	185	82.2	177	80.5	362	81.3
Total Situations	225	100.0	220	100.0	445	100.0

TABLE 95

TOTAL SITUATION AGREEMENT, BY MOTHERHOOD OF NURSE

	Motherhood Status							
	Mothers		Non-Mothers		Not Reported		Total	
	No.	%	No.	%	No.	%	No.	%
Total Situations Agreed	19	19.6	63	18.5	1	12.5	83	18.7
Total Situations Not Agreed	78	80.4	277	81.5	7	87.5	362	81.3
Total Situations	97	100.0	340	100.0	8	100.0	445	100.0

TABLE 96

STRESSFUL SITUATION AGREEMENT, BY MOTHERHOOD OF NURSE

	Motherhood Status							
	Mothers		Non-Mothers		Not Reported		Total	
	No.	%	No.	%	No.	%	No.	%
Stressful Situations Agreed	7	22.6	24	20.9	1	50.0	32	21.6
Stressful Situations Not Agreed	24	77.4	91	79.1	1	50.0	116	78.4
Total Stressful Situations	31	100.0	115	100.0	2	100.0	148	100.0

TABLE 97

TOTAL SITUATION AGREEMENT, BY EDUCATION OF NURSE

	Education of Nurse													
	Less than grade 12		CNA or CND		Student nurse		RN (3 yr)		RN (2 yr)		BSN		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Situations Agreed	5	16.7	27	17.5	13	16.0	24	21.2	9	23.7	5	17.2	83	18.7
Situations Not Agreed	25	83.3	127	82.5	68	84.0	89	78.8	29	76.3	24	82.8	362	81.3
Total Situations	30	100.0	154	100.0	81	100.0	113	100.0	38	100.0	29	100.0	445	100.0

TABLE 98

TOTAL SITUATION AGREEMENT, BY NURSE'S PEDIATRIC EXPERIENCE

	Length of Pediatric Experience							
	Less than 1 yr.		1-3 yrs.		4 or more yrs.		Total	
	No.	%	No.	%	No.	%	No.	%
Situations Agreed	33	18.6	24	20.3	26	17.3	83	18.7
Situations Not Agreed	144	81.4	94	79.7	124	82.7	362	81.3
Total Situations	177	100.0	118	100.0	150	100.0	445	100.0

TABLE 99

SATISFYING SITUATION AGREEMENT, BY NURSE'S PEDIATRIC EXPERIENCE

	Length of Pediatric Experience							
	Less than 1 yr.		1-3 yrs.		4 or more yrs.		Total	
	No.	%	No.	%	No.	%	No.	%
Satisfying Situations Agreed	23	19.0	11	15.3	15	15.8	49	17.0
Satisfying Situations Not Agreed	98	81.0	61	84.7	80	84.2	239	83.0
Total Situations	121	100.0	72	100.0	95	100.0	288	100.0

TABLE 100

TOTAL SITUATION AGREEMENT, BY LENGTH OF CARE

	Length of Care									
	1 day		2-5 days		6 or more days		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%
Situations Agreed	37	16.5	24	20.3	20	21.5	2	20.0	83	18.7
Situations Not Agreed	187	83.5	94	79.7	73	78.5	8	80.0	362	81.3
Total Situations	224	100.0	118	100.0	93	100.0	10	100.0	445	100.0

TABLE 101

STRESSFUL SITUATION AGREEMENT, BY HOSPITAL TYPE

	Hospital Type					
	General Acute		Children's		Total	
	No.	%	No.	%	No.	%
Stressful Situations Agreed	26	21.1	5	20.0	31	20.9
Stressful Situations Not Agreed	97	78.9	20	80.0	117	79.1
Total Stressful Situations	123	100.0	25	100.0	148	100.0

TABLE 102

TOTAL SITUATION AGREEMENT, BY CULTURAL DIFFERENCES

	Cultural Differences							
	Yes		No		Specified		Total	
	No.	%	No.	%	No.	%	No.	%
Situations Agreed	33	21.7	46	18.6	4	8.7	83	18.7
Situations Not Agreed	119	78.3	201	81.4	42	91.3	362	81.3
Total Situations	152	100.0	247	100.0	46	100.0	445	100.0

TABLE 103

CHILDREN AGREED WITH, BY CULTURAL DIFFERENCES

	Cultural Differences							
	Yes		No		Not Specified		Total	
	No.	%	No.	%	No.	%	No.	%
Children Agreed With	17	77.3	29	70.7	0	0.0	46	65.7
Children Not Agreed With	5	22.7	12	29.3	7	100.0	24	34.3
Total Children	22	100.0	41	100.0	7	100.0	70	100.0

TABLE 104

TOTAL SITUATION AGREEMENT, BY PREVIOUS PARTICIPATION OF NURSE

	Previous Participation					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Situations Agreed	16	19.0	67	18.6	83	18.7
Situations Not Agreed	68	81.0	294	81.4	362	81.3
Total Situations	84	100.0	361	100.0	445	100.0

TABLE 105

TOTAL SITUATION AGREEMENT, BY PRESENCE OF NURSE IN ROOM DURING PART OF INTERVIEW

	Nurse Present					
	Yes		No		Total	
	No.	%	No.	%	No.	%
Situations Agreed	8	11.9	75	19.8	83	18.7
Situations Not Agreed	59	88.1	303	80.2	362	81.3
Total Situations	67	100.0	378	100.0	445	100.0

TABLE 106

TOTAL SITUATION AGREEMENT, BY AGE OF CHILD

	Age of Child													
	6		7		8		9		10		11		12		Total	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Situations Agreed	15	24.6	10	15.6	10	16.7	14	22.6	19	21.3	4	14.8	11	13.4	83	18.7
Situations Not Agreed	46	75.4	54	84.4	50	83.3	48	77.4	70	78.7	23	85.2	71	86.6	362	81.3
Total Situations	61	100.0	64	100.0	60	100.0	62	100.0	89	100.0	27	100.0	82	100.0	445	100.0

TABLE 107

TOTAL SITUATION AGREEMENT, BY SEX OF CHILD

	Sex of Child					
	Male		Female		Total	
	No.	%	No.	%	No.	%
Situations Agreed	43	17.6	40	20.0	83	18.7
Situations Not Agreed	202	82.4	160	80.0	362	81.3
Total Situations	245	100.0	200	100.0	445	100.0

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TABLE 108

TOTAL SITUATION AGREEMENT, BY LENGTH OF STAY (STRATUM) OF CHILD

	Length of Stay of Child					
	Short-term		Long-term		Total	
	No.	%	No.	%	No.	%
Situations Agreed	36	17.3	47	19.8	83	18.7
Situations Not Agreed	172	82.7	190	80.2	362	81.3
Total Situations	208	100.0	237	100.0	445	100.0

TABLE 109

TOTAL SITUATION AGREEMENT, BY PREVIOUS HOSPITALIZATION OF CHILD

	Previous Hospitalization					
	Yes		No.		Total	
	No.	%	No.	%	No.	%
Situations Agreed	64	18.3	19	19.8	83	18.7
Situations Not Agreed	285	81.7	77	80.2	362	81.3
Total Situations	349	100.0	96	100.0	445	100.0

TABLE 110

TOTAL SITUATION AGREEMENT, BY ADMISSION CIRCUMSTANCES OF CHILD

	Admission Circumstances					
	Elective		Unplanned		Total	
	No.	%	No.	%	No.	%
Situations Agreed	32	20.8	51	17.5	83	18.7
Situations Not Agreed	122	79.2	240	82.5	362	81.3
Total Situations	154	100.0	291	100.0	445	100.0